

THE
HIGHER POWERS
OF MAN

FREDERICK M. SMITH

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BY
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gree of Doctor of Philosophy, and accepted
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INTRODUCTION

The phenomena of "second breath" are known to every schoolboy, and have played a great role in primitive human life. When a boy has run until he is out of breath and ready to drop with fatigue, he often experiences a reinforcement of energy and a new type of breathing and then can run on indefinitely. So in studying late at night, if we force our way through the riptaps of exhaustion and sleepiness, we often experience a new wakefulness, like a kind of afflatus or inspiration, and we can write better and study more easily. It is not enough to describe this state by saying that the fatigue sense is fatigued and drops out of function; nor is it enough to conceive it, with Feltz, as an adrenaline state, although, as Cannon has shown, the sudden flushing of the blood with adrenaline is the physiological basis of the reinforcement of energy that fear and anger so often give. Psychologically, there is much to be said in favor of the views which conceive of it as if the individual in such states were able to tap the resources of the race that slumber in him.

There are always two aspects of human nature.

One is the individual and conscious, and the other, the phyletic or racial, which is more unconscious and generic. It is this that constitutes the deeper nature of man and in such varied phenomena as inspiration, whether thought to be due to the Holy Ghost or to a muse; and ecstasy, whether of sense, thought, feeling, or will; and in all superlative achievements of man in every domain, we have manifestations of this higher, larger, stronger, racial self, expressed in the individual. There is much justification for saying that most of the greatest achievements of man, not merely in artistic creation and the works of genius, where we are most ready to recognize it, but even in intellectual domains, have been done in this second or higher state, or at least have owed much to it, and a high authority on war has lately told us that this war will be won by that side that can ring up most of this reserve energy, when they go "over the top," or in a bayonet charge.

It is not surprising that these phenomena have, especially in recent years, been connected with sex erethism, for in reproduction we have, as it were, an apparition of the soul of the race performing its great function of transmitting the sacred torch of life along with and beneath the hedonic personal factors.

Moreover, it is now pretty clear that a spurdy diathesis is often associated with self-abuse. This accounts for the inveterate propensity in every religion, from Dionysic orgies to certain recent forms of revivalism, to be accompanied by sex phenomena; and it gives a certain basis to theories that conceive many, if not most, of the higher moral, intellectual powers of man as products of sex sublimation. This view, too, gives us the best key yet found to the problem of sex instruction, which is that wherever we can excite interest of any sort and degree, we are setting a back-fire to erotic temptations, and that to fill the skulls and curricula with topics that absorb attention and arouse enthusiasm, to have the life of the young, particularly during the plastic and susceptible years of adolescence, pervaded with activities that are highly toned emotionally, is one of the best criteria by which to measure the effectiveness, not only of a system of education, but even the value of a religion. When the school is dull and life is drab and religion a dead form, and in general when zests grow pale, then the dangers of lust increase.

The world is just beginning to learn the value of these higher states and how to turn on super-personal motivations. Some modern conceptions

of Jesus make Him essentially not only the totemic, racial man, but the One who, more than any other, throughout His public ministry, maintained this higher and more exalted state. The study of these phenomena which Doctor Smith here sets forth, is well calculated to give us a higher conception of the possibilities of life and of every kind of education. It shows that the higher phenomena of holiness are not something entirely apart but really belong to the altitude phenomena of human nature, which are incomplete without them. Not only religion but morality is illuminated. These dynamic energies that break into the ordinary life of the individual may be good or bad, but the bad is more than ever seen to be only undeveloped good, and certain principles, such as those known to psychology as transfer and the conditioned reflex, that teach us how easily, if we only know the secret, the powers of evil can be converted, as the wrath of man may be made to praise God. The more we know of the old cults about the eastern Mediterranean that preceded Christianity, and also about mysticism and esoteric knowledge, which found imperfect expression in the loftier insights of all the great mystics, even in alchemy and the hermetic and rosicrucian symbols, the more we

are now learning how intense is the warfare man has waged with himself to overcome animal and infantile propensities by giving them an ever higher, more spiritual interpretation, so that we can now glimpse the pregnant sense in which consciousness itself sprang from and can be understood only by conscience. Thus, while man has always been prone to unchain and even give way to passion, he has also always been unremitting in his efforts to transmute it into its higher psychodynamic equivalents. Thus the highest virtue, beauty, truth, is itself passionate.

G. STANLEY HALL.

CLARK UNIVERSITY, January, 1918.

THE HIGHER POWERS OF MAN.

Chapter 1

Some eight years ago Doctor William James published an article under the caption "The Energies of Men" which received much attention from the public and did not escape severe criticism of some (chiefly newspaper men), who branded it as a doctrine of overstrain or an advocacy of the use of stimulants (opium and alcohol) in emergencies. Against such an interpretation of his thoughtful article Doctor James vigorously protested, asserting that the simple message could scarcely be misread by even a casual if fair-minded reader, that simple message being that "second wind" as a mental phenomenon is as real as second breath in the physical realm, and affords a reservoir of energy to be drawn upon when necessary.

Some four years later Doctor G. Stanley Hall in a commencement address delivered at Clark College made a strong appeal for individual endeavor directed toward greater human efficiency in all walks and avocations of life; the community efficiency as the sum total of individual efficiencies to be increased by an increase of efficiency on the

part of each member of the community. It was a plea not alone for an intensification of application and a speeding up by the present workers, but for an augmentation of general or the common efficiency by elimination of the indolency of opulency and the indifference of the comfortably situated.

Our present thesis can be said to concern itself with the correlation of Doctor James's "Energies of Men" and Doctor Hall's "Human Efficiency" by scrutinizing some of the human habits, customs, institutions, traits, and forces which contribute to the higher powers of man and their direction towards better things and accomplishment.

As a starting point, then, it is well to briefly epitomize the articles to which reference is made.

Doctor James's "Energies of Men."

"Warming up" to one's job by wearing off an initial feeling of "staleness" is a common experience. To carry the warming up process up to the acquirement of "second wind" is not so common, but is not rare. But those who push their activities beyond this "first layer of fatigue" are few compared to those who remain this side of it.

May there not also be a third and fourth "wind," representing deeper layers of reserve energy, mental as well as physical?

Physiologists term a man's condition "nutritive equilibrium" when he neither gains nor loses in weight, this equilibrium being maintained by functional adjustment to varying quantities of rations. Usually the daily rations remain by habit quite uniform. "Efficiency equilibrium" may and does obtain on varying quantities of work in varying directions,—physical, moral, intellectual, spiritual.

Of course there are limits, but exceptional are the individuals who crowd them. But the individual pushing his energies close to the limit may still, under wholesome conditions, maintain the pace because the physical organism augments the rate of repair to correspond to the augmented waste.

Few men are active to their utmost limit of energy. Anyone may at different rates of energizing remain in vital equilibrium. One comes short of his possibilities who energizes below that normal maximum. How can we induce all men to reach and maintain the most useful tension of physical and nervous energy to be expended in "inner" and outer work? And this problem di-

vides into ascertaining (1) the limits of the human faculty variously directed and (2) determining the several ways in which just the right stimulus may be applied to the differing types of individuals to produce the maximum of results. This twofold problem has probably never been subjected to scientific inquiry.

It will be generally conceded that habitually the great majority of men use only a small part of the powers of which they are capable; they live below their maximum of energy and their optimum of behavior. It is so from inveterate habit of being inferior to one's full self.

But some men do escape this inferiority to their fuller sense. To what do they owe the escape? And in the individual fluctuations of energy, to what are the improvements due? The answer is plain: To *excitement, ideas, and efforts*. These push us over the dam of first fatigue. Most of us may learn to surmount this and thus be able to live on higher levels of energizing.

The fast life of the urbanite quite terrifies the rustic; but let the countryman remove to the city and he soon adjusts himself to the pace,—he vibrates to the rhythm of the city,—under the stimulation of duty, imitation, and crowd pressure, and the new level of energy is maintained.

Examples where emergencies have forced persons into higher levels of activity not previously thought possible are numerous. A frail mother already heavily burdened nurses a husband or child through an illness; in many poor homes a woman is showing sustained endurance in holding the family together and by her thoughtful application to constant and numerous duties is keeping things going till the family shall have fulfilled its purpose. The *Académie Française* has repeatedly given prizes for best examples of "virtue" to many exemplary housewives, of which Jeanne Choix may serve as a type. The eldest of six children, the father an invalid, the mother insane, Jeanne's splendid courage, plus her small wages at a pasteboard-box factory, holds and directs the family and brings up the children.

Every emergency, shipwreck, mine disaster, siege, cataclysm brings out its hero,—one who could tap the deeper lying layers of energy and keep up his own courage and that of fellow unfortunates.

The case of Colonel Baird-Smith is cited. That officer, so prominent a factor in the siege of Delhi in 1857, for six weeks, despite the handicap of scurvy, sores, and livid spots over the body, a wounded foot turned black from infection, was

carried to his point of duty where he remained on duty though suffering additionally from a badly wrenched elbow and constant diarrhœa. Through it all he worked, planned, cheered the men, and collapsed only after the work was done. Excitement and the use of narcotics were the means of throwing into gear the reserved stores of energy.

For weeks and months the deeper use of these reserves may go on, the process of repair being carried on at a rate different from the ordinary.

When normally appearing tasks and stimulations do not serve to throw in gear these higher powers, deleterious excitement may do so. But this means the borderland of constitutional abnormality. To open these deeper levels under normal conditions the will must functionize. And a single stimulation of the will may suffice to put a man for weeks on a higher level, open a new conscious range of power.

The usual habitual life along the shallower levels tends to close in and shut out the higher sources. Ascetic life, passing from easy to more difficult tasks, habituates towards constant energizing in the higher levels. By the Yoga system Hindu aspirants train themselves for months and years to attain certain mental attitudes with defi-

nite results. Their long devotion to certain ideas seems to unlock the reserves, though crises of religion, love, indignation may by a short cut attain the results reached by the years of patient Yoga practice. Ideas may become the dynamogenic agents in unlocking reservoirs of energy, the vitalizing power of the idea itself depending upon the person into whose mind the idea is injected. When effective these ideas may transfigure the whole life of the individual. Examples of energy-releasing ideas are "Fatherland," "Truth," "the Flag," "the Church," "Science," "Liberty," etc.

The memory of a pledge, a vow, a promise, will stimulate to abstinences difficult of achievement.

Conversions, acting as challengers to the will, stimulate to higher activity, though religiously the idea may lie for years in the mind before it exerts effects. Healthy-minded and optimistic ideas gathered from "New Thought," "Christian Science," "Metaphysical Healing," or other systems of spiritual philosophy by suppressing "fear-thought" or the "self-suggestion of inferiority" have in many instances gone far towards developing a moral tone of sufficient elasticity to rise above the handicap of bodily ailment till even

one afflicted with serious cancer can be cheerfully active and unusually beneficent to others. The mind-cure movement is essentially religious, and however scientifically grotesque its utterances it is yet socially important and of therapeutic value even in medicine. Prayer, when not sealed up by a scientifically critical atmosphere, may be an energizer to higher activity.

Social conventions tend to suppression of truth and taboo certain topics of conversation and tie down our intellect by literality and decorum.

The two questions, then, the possible expansion of our powers and the methods of tapping the sources thereof in various individuals, dominate the problem of national and individual education. We need to chart human limits of energy and study human types, so as to learn how to find and utilize the reserves of energy. Much of human experiences may be drawn on for evidence.

From the foregoing it appears that Doctor James endeavors simply to maintain his assertion that it is possible to reach higher levels of energy than are usually reached by individuals. With this he couples the statement of the problem it presents, viz, How can individual and community education be so directed as to appropriate for

community advancement all the tremendous benefits and results possible if all persons rather than a few were energizing at their maximum possibility rather than near the lowest limit? He attempts no solution of the problem, nor does he even make suggestion as to its solution, resting content with its statement.

One of the purposes of this book is to make a brief study of some of the human institutions, habits, customs, which have contributed towards pushing persons and peoples on to these higher levels, though no solution of the pedagogical problem will be attempted, further than a mere suggestion.

Doctor Hall's address on "Human Efficiency" starts with some very practical aspects of the problem and traces some of the developments towards increased efficiency more by eliminating waste than by increase of activity, a conservation of energy by decreasing lost motion rather than by bringing into play the reserve of power. But he, too, recognizes the existence of this great reserve untouched by the majority, though the problem of how to learn its general use is still unsolved. It is well here to give a brief résumé of Doctor Hall's address.

Doctor Hall on "Human Efficiency."

The culture ideal of our intense practical activity has passed through three stages. The first, enterprise and endeavor, had for its slogan "excelsior," and constantly held out the boundless possibilities of the individual. Next came the call for strenuosity. Achieve by keeping nerve and muscle taut. It was an ideal of stress and was prone to overdraw our resources. Then came the third ideal,—that of efficiency, adding economy and simplicity to the high aim of the first and the intensity of the second. This third ideal aims at the greatest results by the least expenditure of effort. In these three we have the best expression of the American ideal and spirit.

A few of the special aspects are:

1. By long and careful study the movements in bricklaying were reduced to a minimum, resulting in doubling the amount laid with less fatigue. By teaching economy of movement the loading of pig iron was increased nearly four hundred per cent, with no increase of fatigue. In coal heaving, by regulating the load, pauses, and intervals, the work was doubled and more. Similar economies of energy have been achieved in the sorting of steel balls for bearings, preparation of circular letters, hod carrying, canning, labeling,

and perhaps scores of other processes simplified by analysis with concomitant saving in results and conservation of human energy.

2. Investigation in the use of tools and machinery, saving changes in the size of cutting in lathes, the size, form, weight, of ax, scythe, plow, plane, etc.

3. The analysis is carried to systems of accountings, to faulty methods of which many of the eleven thousand business failures per year are due, and great economies have resulted.

4. Standardization of everything, in size and quality; business organizations reduced to types and patterns; commissions formulate model laws for various communities; even acts of incorporation and city charters are modeled.

5. In agriculture new efficiency is the goal, and a large literature, largely governmental, deals with methods for doubling or tripling crop yields, improving farm animals and bettering farm conditions generally. Hygiene associations are striving towards increase of average length of life, thus increasing national efficiency, while medicine is striding towards a mastery of virulent contagious diseases.

Making due allowance for the development of much fanaticism in this new movement, yet, dan-

gerous as it might be to small minds, the great ideal of thought vitalizing work and work vitalizing thought has tremendous potentialities and this culture movement is a large one and of great moral significance. It suggests to laboring men better ways of raising wages than by forcing them up by strikes and boycotts. It suggests to corporations the superiority of expanding by setting in order their house rather than depending upon special legislation, government appropriations, or a high tariff. It suggests to national, state, and municipal governments more effective ways of spending the people's money. It has brought new ideas of more effective armies. It has suggested betterment of the race by eugenics. It has forced attention to our human and financial wastage in our public schools, and forced the colleges to ask why intensity of action in athletics is not paralleled in intellectual pursuits. It asks why school and church buildings lie unused so much. It has stimulated the organization of some half hundred or more types of child welfare movements, and many adult welfare organizations. It has admonished endowed institutions to more dutifully discharge public service responsibilities, and has suggested to faculties and students higher

standards of work, duty, and responsibility in learning and research.

The lesson to draw from this revival in industrial, civic, and cultural circles is that we must take stock of our abilities, attainments, powers, and love of hard work. We must love severe toil till it becomes play. Intellectual workmen must realize that theirs is an artificial life and hence essentially unhealthful unless its devotees by training and hygiene keep themselves at the top of condition as a necessary condition to the best work. Sin is dissipation and weakens accomplishment; while chastity, temperance, honesty are dynamic assets. The scholar to-day must read hard and much, with systematic training to prevent forgetting. A knowledge of such technique would make for great economy for brain workers and would tend towards larger results in the academic field.

To-day virtue is not enough; we must eliminate the inefficiency of good men. We live below our highest level and we must learn to energize up to our maximum,—to break through at least the first fatigue barrier and in our second breath unlock the usually slumbering powers. We must throw off that which psychiatrists tell us is frequently the beginning of many psychic derangements, viz,

the oppressive sense of inefficiency. It is not work but worry which breaks down, and worse yet is work without sufficient interest to vitalize it. The powers and heritage of man's countless ancestors slumber in him, and to waken and put them to work is his problem. Superior ability is by no means rare though its development may be. We need to be aroused by some consuming interest. Many are the dynamogenic powers to awaken it; love, science, a new affection, a great idea, or even the looming prospect of death.

The efficiency ideal even introduces new theories of culture. The best mental development accompanies close contact with real things, and in the realm of theory pragmatism becomes a large movement of efficiency. Impractical knowledge it would cast out; knowledge must be humanistic; the best school of theology is anthropology.

Doctor Hall closes his address by presenting to the students the problem that confronts each, determining the way to best serve the human race really and efficiently, for service and efficiency form the clear call to young men made by the spirit of the times.

The great importance attaching to Doctor Hall's thesis lies in the fact that if by scientific management and study of industry we have already increased the amount of work accomplished at the expenditure of the usual amount of energy or for the usual degree of fatigue, then by a tapping of the generally unused reservoirs of reserve energy, a further multiplication of effective results will follow. But it is well to note that in much at least of the work already done towards greater efficiency man is treated largely as a machine—lost motion taken up, speed increased. Without arousal of interest, domination of an idea, devotion to a cause, the reservoirs remain untouched. Man is not merely a machine, though capable of purely mechanical work, and a soulless system efficiency is not calculated to arouse this far higher efficiency pointed to in Doctor Hall's address and hinted at by Doctor James.

Chapter 2

"Second Breath."

"Second breath," or "second wind," has been spoken of several times in the foregoing and it is well here to speak somewhat of this phenomenon. The best psychological treatment of it is doubtless that of Doctor George E. Partridge in *Pedagogical Seminary* for April, 1897 (volume 4, number 3), of which we here present a short résumé.

The article is a presentation and analysis of returns from a questionnaire sent out by Doctor Hall in 1895, and contains data of the phenomena pertaining to both physical and mental erethism as observed in a number of young people particularly.

The "catching of second breath" is observed in mental work (studying, etc.,) as well as in running, rowing, and other physical efforts, in day as well as evening work. The ages of those making returns ran from eight to twenty-five, the majority being from sixteen to twenty-two.

In the cases of physical second breath a feeling of fatigue following exertion would, if the effort be kept up, be followed by an apparent recovery

from the fatigue when the effort could be maintained for an indefinite time. In one case noted there was a succession of such fatiguing and recovering. This periodicity was not noted in many cases.

The cases of mental second breath were nearly all those of studying. One individual who worked days studied at nights, each time forcing himself past the initial line of fatigue. He reported continuing this for a year. He found that eating or drinking before the fatigue period would cause drowsiness to come more quickly, making it more difficult to overcome the fatigue. The average time for sleep was four or five hours. His health was injured by the experience.

In only eight of one hundred and sixty-eight cases did the change from fatigue to erethism come suddenly,—the change usually being gradual. Some stated that after the passing of the fatigue their work was better than before, while about an equal number thought their work after was equally as good as before. The length of time elapsing previous to and during fatigue was not specified. There was usually present a clear effort to push one's self past the fatigue period; a determination to finish, sticking to it, persevering, fear of examinations, etc. In the majority

of cases there was noted and mentioned a distinct reaction, often continuing into the second day after.

Doctor Lombard in his experiments on the flexor muscle of the middle finger ascertained these periods of fatigue and recovery,—five times in twelve minutes. He believed the physiological action involved to be a complex of changes in the central nervous system.

Doctor Cowles in his work on “Neurasthenia” treats this “second breath” as a pathological condition in which the true fatigue condition is not recorded by reason of the exhaustion of the fatigue sense. The true conditions of the body are not longer reported correctly. But Partridge remarks that complete exhaustion of the fatigue sense in second breath phenomena is not evident. Fatigue can be felt for long periods when the occupation stimulation is absent. It is, he thinks, a question of rising above the sense of fatigue, just as severe pain may be forgotten by closer concentration of the attention upon some other object.

There is probably a close connection between the phenomenon of second breath and hyperæmia. Doctor Hammond describes in his work the symptoms of hyperæmia from various causes (among which emotional disturbances lead), the subjec-

tive symptoms being similar to those of second breath; fullness in the head, flushed face, quickened breathing and heart beats. Among musicians it is held that best singing is done at night rather than in the morning. Athletes "warm up" by getting an increased flow of blood.

Emotion plays an important part in prompting the continuation which brings into play second breath. The part played by emotion in blood circulation in the brain has been pointed out by Mosso. Even pain may be a spur to the nervous system. In many religious cults pain has thus played an important role in raising the organism to states of intoxication and ecstasy. Flagellations and martyrdoms are evidences.

The subjective stages of fatigue and recovery Partridge gives as follows: 1. Feeling of exhaustion and pain, with diminished muscular activity. 2. Intensification of emotional tone; fear, anxiety, rivalry, prompting continuance. 3. Feeling of increasing power, with sometimes a feeling of pleasure in the pain and in overcoming it. 4. Cessation of pain, absorption in work, feeling of increased power and momentum.

From the cases studied by Partridge physical erethism appeared to be less disturbing than mental. The relation between erethism and absorp-

tion states is close, and between these and hypnosis, trances, ecstasy, there is also a close relation.

This subject of second breath is closely bound up with that of fatigue, which we shall briefly examine in another section of this paper.

Chapter 3

Alcoholism.

It will have been noted that Doctor James brought into his discussion of the energies of men the question of alcoholic and narcotic stimulation, for which he was in some quarters roundly censured as an advocate of "sprees" and intoxicating beverages as stimulators of activity, especially in emergencies. If an attempt by a so widely known scientist to examine facts observed in connection with well authenticated incidents subjects him to such severe and overdone criticism by zealous but perhaps unwise and unfair devotees to the cause of temperance, it is scarcely to be hoped that a less lucid writer than Doctor James will escape being misunderstood and his language made to apply where not intended. But alcoholism, "intemperance," "drunkenness," intoxica-

tion, narcosis, have played and do still play so prominent a part in the history of human affairs that a consideration of them must have some place in a discussion of the subject matter of this paper, whether it is held that they play a direct role in arousing the higher activities of men or only in a negative way exercise an influence.

Much has been written on the general subject of alcoholism, but for the purposes of this paper it will be necessary to give attention to only two articles, both by psychologists; one a paper by Doctor G. E. Partridge on "The Psychology of Intemperance"; the other by Doctor G. T. Patrick on "In Quest of the Alcohol Motive," of which we here present epitomes.

Partridge's "Psychology of Intemperance."

The problem in the psychology of intemperance is at bottom to find the nature of the impulse to use intoxicants. To determine the nature of the impulse to use intoxicants is important not alone from the standpoint of scientific psychology, but as a basis on which to determine control of intemperance. The voice of science must be heard on this great moral and social question as well as on all others. The persistence of the impulses to intemperance indicates a deep-seated

basis in the history of the human mind. It is necessary also to understand what it is that is craved. The strict scientific attitude would deal only with determination of facts, but closely associated therewith is the tendency to evaluate. This may have tended to a misunderstanding of some of the problems connected with intemperance.

Geneticism assumes that all deep-seated mental traits have their origin in animal life, those more lately acquired, of course, going back a shorter way for their roots, though their predecessors may be determined. Even religion genetically studied has been found to have its roots in fear and primitive love. It might be well therefore to ask, Do animals undergo the effects of stimulants and intoxicants as do men, do they acquire the habit of intoxication, and does the acquirement of these habits bear a definite relation to the general, useful activities of the animal? Animal psychology has as yet not much to offer. There is, however, evidence that large doses of alcohol affect many species much the same,—an increased activity being followed by decreased activity. Some insects (e. g. wasp) become intoxicated by overripe juices. Whether or not animals acquire a craving

for such intoxicants is difficult to say, though they may have formed a habit.

Among the many problems presented by animal psychology in this connection, it is well to remember that whenever a habit or particular form of activity has been acquired in man or animal it indicates a practical root; and when we trace the higher emotions of man back to their beginnings they are usually found to be connected with the perpetuity of the race or the preservation of the individual, or both.

Intoxication among primitive peoples has played an important role, and the custom is probably polygenetic. Alcohol has been a great factor in the mental, religious, social life of the people. Endless myths, rites, ceremonies, and superstitions have crystallized about the use of intoxicants. Excitement has been considered often as essential to religious feeling, and many methods have been employed to induce this excitement, intoxication being one. "It is a long way from the ancient soma worship, in which all the devotees of Indra became intoxicated to please the god, to our own solemn sacrament of the communion, yet none of the transitional steps are lacking; and psychologically at least this sacrament must be

supposed to have a deep ancestral root in primitive intoxication rites." (P. 25.)

Many American Indians use the mescal button in their religious ceremonies. The Pueblos become intoxicated in some of their religious ceremonies, while at least one of the sacred festivals of the Yakuts is only an elaborate drinking ceremony. The Ainos of Japan and the Polynesians drink to the gods, while with the Fijians prayers or chants accompany the drinking. The Patagonians stress intoxication in religious ceremonies. Tobacco among the American Indians is quite common in religious and solemn ceremonies. The excitement of the Shaman is frequently augmented by the use of intoxicants. Many other instances could be cited.

Much of the evidence indicated a social and religious origin for intoxication. Very few tribes of primitive peoples have been found in which some form of intoxicant was not used.

Among primitive peoples the tendency to enter states of abandonment is deep-seated and in practically all states of excitement, whatever may be the method of producing them, the tendency is to carry the state to a breaking point. This is illustrated as well by the dance as intoxication.

A comparison may here be made between the

intoxication habits of the primitive and the child. In both there seems to be the craving for the ecstatic states. The capacity for states of tensity may be increased at puberty. This period may be characterized as one of intoxication.

Among civilized nations, according to Samuelson, there has always been a period of prevalent intoxication just previous to and again just after the attainment of highest culture. This is a natural outcome of decadence in national spirit accompanied usually by widespread pessimism in religion and other interests. Greece in the Dionysiac cults presents a good example of a religion developing from the intoxication impulse.

The work of the Renaissance was to revive emotions as well as learning, and with the awakening of the emotions came in man a consciousness of his powers, and confidence in his powers brought a feeling of freedom. There was a change from outer to inner control, with no control at all during the transition. In strong and dominant races there is also a strong craving for excitement tending towards intemperance, as for example, the ancestors of the Saxon races.

Besides this impulse for intoxicants indicating a craving for pleasure and larger activity, there is also the narcotic impulse, which seems to be a

craving for rest, associated with relaxation, recreation, etc. Stimulants center the attention on the future while narcosis is self- and past-centered. Pain spurs the nervous system on; and attempts to gain surcease from pain by entering the dream world of narcosis, is an expression of a longing backward.

In a society of growing complexity the intoxication impulse is far from a single one. This is particularly true of our own national life, where we have a most intricate mingling of classes.

Here again the comparison between the race development and that of the individual may be made. As the race in the Renaissance passed from an outer to an inner control, so does the individual at adolescence become a complete individual where the newly arising forces confused and uncoordinated gradually give way to the guiding force of purpose which molds the career of the adult. There may be a period when in the transition from the outer to the inner control there is not control at all, and the life is torn by intemperance when there is danger of the lower forms of intoxication becoming dominant and persistent.

The fact that drinking is more frequent among all peoples among men than women may be ac-

counted for by temperamental sex differences. Physiologically the male may be described as katabolic, the female anabolic. Among primitive peoples the occupations requiring intense activity alternating with periods of comparative inactivity usually belong to the males, the steady occupations of monotony and repetition being taken over by the women. Work normally consumes at least in part the capacity and desires for excitement and erethic states. This even control removed there is likely to recur the old erethic rhythms. Woman is more likely to be injured by erethic activities, hence her motive for narcotics is more likely to be pain than craving for excitement.

All strong motives have left their trace upon literature; and so it has been with the intoxication impulses. A very large number of terms to indicate states of intoxication have been collected. A frequent theme in primitive philosophies is the origin of wine. In literature two great themes appear as the intoxication motive, intoxication and narcosis; while in medicine the intoxication impulse has left its impress in the doctrine of stimulus.

(It is not necessary here to incorporate a summary of the chapter on Mental and Physical Ef-

fects, as that has been pretty well covered in the summary of Patrick's article, elsewhere examined.)

Alcoholic intoxication is essentially an exaltation of feeling followed by a depression. In the state of exaltation there is experienced a sense of a more abundant life and a loosening of control of external forces. Life seems richer, a sense of lost control is felt, and the mind feels itself free from the usual inhibitions. It is this feeling of freedom and expansion which is sought by the individual in intoxication. The physiological processes forming a basis for this change in the mental states are not well determined. The stimulating effects may be from a loosening of lower mechanisms by an inhibition of the higher.

Two types of a general character favor the formation of morbid use of alcohol: (1) the undeveloped type, and (2) the degenerate (nervously morbid).

A study of inebriety shows that one of the motives of alcoholic excess springs from a normal yet universal desire for the largest and intensest life. It is established as excess by abnormal development from inner or outer defect, or both.

In the majority of cases studied, there is little physical craving for alcohol. The habit is social,

though chronic craving may be thought to exist in cases where general fatigue and distress are mistaken for the need of alcohol. The craving is found to be strongest during the most active decades of life.

The narcotic motive seems to enter when interest in life begins to decline, an instinctive old-age desire for relief from pain.

From the foregoing résumé of Doctor Partridge's article it will be seen that according to his theory of the alcohol motive alcoholism functionizes as a factor in freeing the energies of men because under the influence of alcohol there is aroused a sense of power enjoyed by the inebriated individual at certain stages of intoxication—the feeling of an expanded self—an exaltation, from which euphoristic feeling a stimulation towards higher activities and greater energizing is derived.

From quite a different angle is the problem approached by Doctor Patrick.

Doctor Patrick's "Quest of the Alcohol Motive."

Among few savage tribes known to anthropologists is the use of alcohol or an equivalent unknown. Its discovery and use appears to have been autochthonic rather than having spread, the various methods of expressing from fruits, grains, or vegetables having been developed independently in the keen quest for alcohol and its results.

What desire has motivated it?

In our own and other civilized countries, de-

Period	Gals. per capita	Period	Gals. per capita
1850	4.08	1899	16.82
1860	6.43	1900	17.76
1870	7.70	1901	17.65
1871-80	8.79	1902	19.14
1881-90	13.21	1903	19.57
1891	16.72	1904	19.87
1892	17.13	1905	19.85
1893	18.20	1906	21.55
1894	16.98	1907	22.79
1895	16.57	1908	22.22
1896	17.12	1900	21.06
1897	16.50	1901	21.86
1898	17.37	1902	22.79

spite the enormous sums of money spent in opposing the spread of its use and manufacture, its use increases constantly, as shown by the preceding table of per capita consumption of alcoholic bev-

erages, the figures being from the Internal Revenue office:

Efforts to limit the sale of intoxicants have undoubtedly kept these figures from mounting to higher proportions. The cost to the German people for intoxicating beverages about equals that for meat, fish, and fowl combined, and seven eighths as much as for bread, meal, bakery goods, and potatoes combined: while in the United States the annual wholesale value of vinous, malt, and distilled liquors about equals that of our entire wheat crop. The additional cost of imported liquors and those distilled illicitly would greatly increase the cost of our annual drink bill.

That to humanity alcohol holds great interest is evidenced by the fact that language is rich in synonyms for intoxication, Partridge having compiled some three hundred and seventy words and phrases in English and stating that some six hundred had been collected in German, while poetry has in every age sung the praises of wine. Religious ceremonies in which alcohol or intoxication play a part are frequent, while legislative enactments looking towards stopping or checking the use of intoxicants would fill volumes.

The psychologist is confronted with the task of determining the alcohol motive as a contribu-

tion towards solving the social problems connected therewith. A scientific investigation of the effect of alcohol on the body and mind is the first step. Recently this has been studied with small doses as the basis, yielding the following important conclusions: 1. To the presence of ethyl alcohol in intoxicating beverages is due the desire therefor. 2. It is not desired because of its food value, recent investigations showing that it has none. 3. It is not a stimulant, as formerly believed, but is on the other hand a depressant upon all forms of organic life from the complex nervous structures of the human brain down to the simplest micro-organisms. But were it a stimulant, as formerly held and still held by some, it would not answer the question of why a desire which is so nearly universal, when stimulants would only answer under abnormal conditions. 4. It does not increase muscular efficiency. Experiments made by Warren, Frey, Schnyder, Destree, Tavernari, Kraepelin, Fere, Partridge, Rivers, and others, using the ergograph and other dynamometers to show the muscular effects of small doses, showed a slight increase at first, followed by a decrease. Larger doses showed larger decrease in efficiency. Later Rivers and Webber, using a control drink so the presence of alcohol was not known to the

subject, found the momentary initial increase absent. They thought thereby that suggestion had something to do with the result of former experiments. There is some ground for believing that alcohol shortens reaction time, though it has not been shown that this is any advantage. Kraepelin's conclusion is that the laboring man who uses alcohol is attacking the very foundation of his efficiency. Hodge, experimenting with retrieving dogs, found the alcoholized dogs did one half as much work as the normal ones. Durig's experiments in mountain climbing showed that a decrease of twenty per cent in efficiency followed moderate doses of alcohol. 5. Alcohol, according to the experiments of Kraepelin and his associates, deadened all mental processes. The experiments of Schnidman in language translation, Lieutenant Boy upon Swedish soldier riflemen, Mayer in writing speeds, Aschaffenburg with typesetters, Smith with memory processes, Furer in choice-reactions, with the subjects taking small doses of alcohol, all found the efficiency impaired. It may be safely said, therefore, that the desire for alcohol does not lie in the increased efficiency. Helmholtz on his seventieth birthday, in a speech in Berlin said that the smallest amount of alcohol frightened

from him his best intuitions, that his brightest were when the freest from alcohol.

It was formerly held that alcohol had therapeutic value; but more recent investigation shows that it is not a cure for disease but a cause of disease. It acts as a toxin to higher organisms and its moderate use breaks down the power of resistance to disease, while excessive use develops a long list of diseases.

Alcohol does not contribute to longevity, but on the other hand, as has been found by insurance companies after long and careful research, the abstainers have a better chance for long life.

While alcohol encourages sociability, yet this does not seem at all proportional to the desire for it; furthermore, its use is followed by a long list of social evils, as poverty, crime, racial degeneracy; and while these come only from immoderate use, yet the charge can be well laid that its moderate continued use is likely to lead to its immoderate use, and so to the evils thereof.

Besides the foregoing facts it must yet be noted that the desire for alcohol is common to both civilized and uncivilized man, tends to increase in spite of opposition, has reached an unparalleled intensity in present prosperous and rich communities, is strong among the plodding underpaid

laborers of manufacturing and industrial centers, is stronger in the northern progressive peoples than among the southern, is stronger among the adult males than among women and children, and is not an appetite in the ordinary sense, as it answers no inner need of the body.

The desire for alcohol may be explained on the ground of its immediate effects on mental pleasures. It deadens pain, banishes care, produces euphoria; it may temporarily remove or alleviate fatigue, fear, anxiety, and to some extent physical pain. But this explanation encounters difficulties. Nonalcoholic joys were never more numerous; rich and poor have better opportunities for pleasure. Psychologically it is understood that joy and pleasure are the mental concomitants of physical well-being, while alcohol is toxic to organisms. While the joys of alcohol are apparent, as are also the injurious effects, the "demand for joy" theory as an explanation of the desire for alcohol is too superficial. We must look deeper.

The narcotic theory, that it acts as a sedative or anesthetic, fails as an explanation to account for its lesser desire among women, who have their share of pain. This theory would answer only in times of national decay or general degeneracy. Nordau presents the narcotic theory and holds the

present time to be one of degeneracy, while Partridge acknowledges the narcotic motive as an element and thinks it betokens "old age and disease in a nation." That the desire exists more strongly in times of great national vigor argues against this theory.

Reid has advanced the theory that this desire is an evolutionary by-product, coextensive with mankind and harmful in its results, to be met only by natural selection eliminating those with whom the desire prevails.

Partridge finding in the narcotic motive desire to escape from pain, to find in activity relief from the strenuous life, thinks the intoxications motive is still more important, springing from a desire for higher states of consciousness, exaltation, more abundant life, freedom, expansion,—the erethic impulse or craving for excitement. But alcohol contributes to a less abundant life, produces lower states of tension, and for this very reason, as we shall see later, is desired.

A satisfactory theory for the alcohol desire must be well grounded in an accurate knowledge of the whole history of man, especially his mental development, of the action of alcohol on the brain; and in the absence of all this only tentative theory can be advanced.

Man is differentiated from lower animals by the development of certain mental powers, chief among which is the power of voluntary sustained attention. The subjective correlate of psychological and physiological progress is tension. Towards the enlargement of the necessary cortical brain centers the "will to live" or some "vital impulse" is constantly driving us. These newer cortical centers, higher than the others, are more easily fatigued and hence need more rest, part of which is secured in sleep when the lower centers are active, and partly through activities in which other and lower centers are brought into play. These activities are called relaxation, and play an important part in our daily life. The best examples are in children's plays and in adult sports. The plays of children are reversionary, are self-developing, and supply their own interest. So in adult sports, the most relaxing and restful are those which use old racial brain paths and rest higher ones, like hunting, swimming, fishing, dancing, etc.

But early was there discovered artificial means of relaxation, through drugs. Ethyl alcohol, produced where the sugar of fruits or grains comes in contact with the yeast cells, has the property of paralyzing to a greater or lesser degree the

later developed and higher brain tracts so much used in the strenuous mental life. Thus does it afford relaxation, turning the brain energy into lower and older channels while the higher rest under the narcotic. Not that the toxic effect of the alcohol is selective, but because those portions of the brain having least resisting power come first under its influence, though the depressive effect is felt by the lower reflex centers, raising the threshold value of the reflex arc, thus diminishing reflex excitability.

Thus alcohol appears as a depressant of the higher forms of mental activity, acting indirectly as a stimulant of the lower by transferring the brain energy into lower channels, though under progressive alcoholic influence the older and more basic impulses are loosened until coarseness and even criminal tendencies may be reached. That is to say, the whole human racial history is traversed in reverse direction. Physiologically and psychologically, then, the desire for alcohol may be termed an expression of a demand for release from the strenuous life, by strenuous being meant any condition of unrelieved tension—in the high pressure life of our cities or the unrelieved toil of the industrial laborer. Even the life of the savage is tense as compared with the

lower animals, while the greater tension of higher life accounts for the increasing demand for alcohol.

We thus see why the use of alcohol follows the law of rhythm. The need for relaxation is cumulative. And it thus appears that the effect of alcohol is in the nature of a catharsis. Efficiency, the cry of the age, demands more efficiency, and the desire for alcohol is the demand for rest,—release from tension.

But unfortunately the relaxation brought about by alcohol is at a price. Play and sport are relaxing and recreative, while alcohol is relaxing and destructive, for in its train as a poison there is a heavy balance of damage to individual and society. The lack of intellectual progress bemoaned by Gladstone may be due in part at least to meddling with ethyl alcohol.

Briefly stated, according to Doctor Patrick the alcohol motive is found in the desire for relief from the tension which is a correlate of intellectual progress, the tension becoming greater as men live more nearly up to the limit of the latterly acquired capacities, alcoholic intoxication affording artificial relaxation and at least temporary relief from the fatigue resultant upon sus-

tained use of the higher faculties. This theory of the alcohol motive would bring it close to, if not into identity with the play motive.

Unless it be possible to harmonize these two theories as each contributing towards the same end, it will be necessary to reject one or both, for as set out by their respective authors they are out of agreement. Doctor Hall thinks there is not a real opposition between the two, holding that it is a question of incidence of erethism.¹

If we assume that erethism is present in alcoholic intoxication then it is a question of incidence, and the form of activity assumed as a result of the erethism is merely a question of what one of the older motor patterns is activated thereby. But it may as well be a question of erethism itself as one of incidence of erethism. In other words, Is alcoholic intoxication artificial second breath, or artificial ecstasy? Second breath in the intellectual realm turns the erethism to the neopalium or more lately acquired activities, and hence becomes a stimulator of higher powers. In alcoholism, does the erethism (if there be erethism) ever fall upon the highest centers?

¹Private correspondence.

Sergi's conception of the human character being built up by successive layers, the most recently acquired lying uppermost, is generally accepted by psychologists. The activities centering in the more recently acquired layers have motor patterns less stable, and fatigue is more quickly reached by their use. Tension is less severe in the older, deeper lying ones. Hence the relaxation in play, sports, etc.

The power of sustained attention marks the superiority of man, of some men over others. Attention may be sustained upon one thing, one point, for a time. Under certain conditions there may be a limitation of consciousness upon a single point, brought about by a suppression of the functions of the centers of inhibition, when the whole psychical energy is for the time centered upon this single point, which may be a sensation, a thought, an idea. This is the ecstatic state which we discuss in another part of this treatise. Because of the concentration of the whole psychical energy upon the one point, there is a heightening of functions in this direction, because nervous energy is transferred from other nerve paths and converge upon the one.

The psychological conditions arising from alcoholic intoxication present a picture in some

ways quite similar to that of ecstasy. The similarity is likely to result in erroneous conclusions unless one important difference is noted. There is lacking that one central focus of attention which in ecstasy receives all the power and intensity of which the personality is capable. One thing after another comes into consciousness in its own right by reason of higher centers of activity being paralyzed; it is not a convergence of psychic nerve stream but a shutting off of some.

More recent investigations of alcoholic intoxication indicate that it takes place as a progressive paralysis, proceeding from the more recently acquired psychic layers downward to the older and better established ones. There is a gradual descent into the depths of animal sensation and action by a suppression first of the results of personal self-education, then family traditions, and lastly the cultural acquisitions of centuries. (Segaloff in *Zeitschrift für Psychotherapie und Medizinische Psychologie*, III Band (1911) S. 289.) The course, then, of the psychic retrogression due to the progressive paralysis of the mental characteristics depends upon the psychological life of the individual and his forbears. The poorer and narrower has been his mental heritage

and development, the more sharply and quickly will the characteristics of the prehistoric and pre-cultural beastlike life make their appearance.²

In ecstasy there is erethism because of a convergence of psychic power upon a single point with not a paralysis of the other psychic functions but simply a withdrawal of attention from them. In alcoholic intoxication certain psychic functions come to the forefront of consciousness, not because of an erethic enlargement thereof, but because of a paralysis of other functions through the effects of the poison. In fact, the functioning of the psychic activity in consciousness is in all probability asthenic because of a general lessening of the flow of nervous energy. To be sure, the motor patterns are in the older and better established centers, and a less than normal functioning might produce a feeling of euphoria because of a deadening of the fatigue or pain or neurasthenic sense centers. Hence the feeling of expanded self or enlarged powers felt by the drunken man is not due to erethism or second breath, but to a relaxation resulting from paralysis of the higher, stronger tension producing centers.

²Segaloff, cited above.

It is interesting in this connection to note a pen picture of this effect of alcohol, taken from Andrejeff's novel, "Tma," and quoted by Segaloff in the article referred to above:

"He had been drinking much but was not drunk (*berauscht*) ; something different was happening in his soul, something which not infrequently the strong mysterious alcohol effected. It was as though while he drank in silence, there was going on within him rapidly and mutely a great and destructive work. It was as if everything which he in the course of his life had experienced, loved, and planned (*durchdacht*), conversations with friends and fellows, books which had been read, dangerous and seductive activities, all were silently consumed and destroyed without leaving a trace; but through it all he himself was not destroyed, but became stronger and more severe. It was as though with every additional glass of spirits he reverted to his primitive cause, to grandfather, great-grandfather, to those elementary original seditionaries, for whom sedition was religion and religion was sedition. Like fading colors under hot water, strange book-lore dissolved and paled and in its place arose something peculiar (*Eigenes*), wild and dark, like the voice of the black earth. And wild

men, boundless expanses, primeval forests and fields drifted (*wachten*) from this last dark wisdom; to be heard in it were the cries of frantic bells, to be seen in it was the blood-red of flaring flames, and the clatter of iron chains and the terrified flight and the Satanic laughter of a thousand giant throats, and high above the uncovered head the black sky."

Chapter 4

Ecstasy.

The fundamental position which in this treatise is given to ecstasy and the ecstatic state in certain of its aspects as a factor contributing towards calling into action the higher powers of man, justifies a somewhat lengthy examination of its psychological moment, though of necessity its discussion must be limited by the emphasis being laid upon certain fields of its activity.

From a Greek word meaning a putting out of place, a displacement, a derangement, it is by dictionaries given such a variety of definitions as clearly to indicate that it is a word loosely used. Webster defines it, first as "the state of being beside one's self or rapt out of one's self; a state

in which the mind is elevated above the reach of ordinary impressions, as when under the influence of overpowering emotions; an extraordinary elevation of the spirit, as when the soul, unconscious of sensible objects, is supposed to contemplate heavenly mysteries"; and, second, as "excessive and overmastering joy or enthusiasm, rapture, enthusiastic delight." A third he gives as obsolete, while his fourth, or medical definition is given as "a state which consists in total suspension of sensibility, of voluntary motion, and largely of mental power. The body is erect and inflexible; the pulsation and breathing are not affected."

Among medical writers much confusion in the use of the word exists, as it is quite differently employed by various writers. Tuke's Dictionary of Psychological Medicine says that the word *ecstasy* is "usually restricted to that condition of the system in which a person presents opposite phases of mental action, some faculties being exalted and others depressed; sensation and locomotion being suspended. It is so allied to catalepsy that the term '*cataleptic ecstasy*' is often employed: as also is that of '*ecstatic trance*.' With ecstasy we always associate the idea of something more than immobility and the loss of objective conscious-

ness, namely, the impassioned attitude of the patient, whether sitting or standing, the eyes being fixed and open, with or without utterances of a religious or enthusiastic character. The whole mind seems to be absorbed and concentrated upon some grand idea, especially of a supernatural character. . . . Mystics in all ages have been more or less examples of this neurosis."

From the foregoing quoted definitions, it will readily be seen how loosely the word is employed. A good general definition is that given by Baldwin in his "Dictionary of Philosophy and Psychology": "A condition of the nervous system and mind characterized by immobility, suspension of normal sensory and motor functions, and rapt concentration upon a limited group of ideas. It is particularly characteristic of various forms of religious absorption."

From Tuke's definition it is clear that he holds ecstasy to be a pathological condition. Ecstasy has played an important role in human affairs, particularly the religious, and it is scarcely stating the matter fairly to hold that it is always associated with the pathological. Ecstasy is the central experience of religious experiences usually associated with mysticism. Not alone religious

ideas, but any much desired thing may become the object of ecstasy.

Among the best treatises on ecstasy still stands that of Montegazza, the Italian psychologist, though written some years ago. We shall here present an epitome of his work, or such of it as appears to have bearing on our subject. We take it from the German translation, "*Ekstasen des Menschen*."

As usually applied the term *ecstasy* refers to the "more than highest" conditions of pleasure, inspiration, and the boldest flights of thought. But the ecstasy here dealt with refers more to "a hypnotism of the emotions and of the thoughts," more often of the first than the last. The ecstasy bordering on drunkenness, hallucination, somnambulism, delirium, catalepsy, is an exceptional condition, is transitory, and rather rare.

Hypnotism is an artificial sleep, more or less deep, during which part of the brain functions are suspended while others are extraordinarily stimulated. Hypnotism is developed by fixity of gaze on glistening object, magnetic strokes, continuous and uniform noise, the sound of tuning fork, etc. In ecstasy, on the other hand, we do not have an outer sensation and a unilateral excess of the

functions of thought or of an emotion through which all other brain functions are suspended so that consciousness directed within absorbs itself in the indefinite and undefinable power of a dominant feeling or a thought. Quite generally this exaltation and the condensation of mental powers upon a single point is accompanied by a great pleasure sensation; and therefore has the word *ecstasy* been applied to the voluptuousness of love or an ecstatic pleasure carried to an extreme. But it is too fugaciously ecstatic if at all to be included in real ecstasy.

The close relation of the physiological processes, ecstasy and hypnotism, the first being a higher form of the latter, calls for a look at the latter. Doctor Liebault has distinguished in hypnotism five stages: (1) Stupor; blunting of the senses. (2) Light sleep, in which the one hypnotized still hears what is spoken to him. (3) Deeper sleep; nothing is remembered of what has been said or done or heard, yet always retaining relation to the present as well as with the hypnotizer. (4) Very deep sleep, in which the hypnotized is entirely separated from the outer world and retains relations only with the hypnotizer. (5) Somnambulism.

Liebault and many others explain hypnotism

as due to tensed attention with concentration of thought, while Durand de Gros holds the essential characteristic moment of hypnotism to be that it limits activity to a minimum and reduces work to its simplest expression. Hence the brain is subjected to exclusive stimulation of a simple, uniform, continuous sensation, bringing about a suppression of mental activity except in a single direction; but the unused nerve force heaps up in the brain, resulting in a nervous congestion. The accumulated nerve force can transfer itself to one or another path, upon one or another nerve, or sense organ, whose activity is thus markedly augmented, the direction of transfer being governed by the suggestion of the hypnotizer.

As in hypnotism a portion of the brain is isolated by overstimulation while functions of other parts are suppressed, so in ecstasy, by intensive fixation of thought there is concentration upon a single desire, a single feeling, all mental powers upon a single point; and so enter the phenomena of hypnotism, such as catalepsy, hallucination, anesthesia, etc. Of our five senses those which are the most closely allied with thought and feeling bring about ecstasy; namely, sight and hearing. The feeling perceptions reach this goal only when closely related to the sex instincts.

But pleasurable sensations and ecstasy are closely related; and one who has once experienced the pleasure of ecstasy values it above other joys and is prone to recall it often.

Intoxication stands in close relation to ecstasy and has characteristics in common with it, but not every kind of intoxication. In alcoholic intoxication the disorderly tumult of the psychical elements, together with the centrifugal manifestations of nervous life, prevent the inner concentration without centrifugal expression which is necessary to ecstasy. In ecstasy exalted consciousness is focused on a single psychical point; in alcoholic intoxication consciousness is first disturbed, then lost entirely.

Narcotic intoxication is most closely related to ecstasy, in some forms strikingly so. It is *chemical ecstasy*, while ecstasy might be termed *psychical narcosis*. In both there is isolation of the outer world, anesthesia, hallucination, visions, and even catalepsy, and there is absorption of the *I* in contemplation of the mental pictures. No one so resembles a Dervisher in ecstasy as a Bolivian coco-chewer or an Indian opium smoker.

A fool, a lover, and an opium smoker may exhibit similar symptoms, though the causes are quite different, and histology may some day tell

us why nerves come under the same influence from mental aberration, from love, and from opium. Goethe has said: "Youth is drunkenness without wine"; and of ecstasy it may be said, "It is narcosis without opium, hasheesh or coco."

Definite nervous conditions on the one hand and external influences on the other are essential for ecstasy. One may be naturally and extremely ecstatic without once experiencing or surmising what ecstasy is. Of the two, the nervous system and the environment, the first is more important. Environment can change the form of ecstasy. There have been several historic periods favorable for awakening ecstasy and turning it in certain directions.

Of the conditions essential for ecstasy the in-born are continuous; the others temporary, hence transient. Few are the unfortunates who at no time have experienced at least the twilight conditions of some kind of ecstasy.

The progressive development is schematically as follows:

1. Concentration of attention upon a single point of consciousness—a sensation, a thought, or a thrilling feeling.

2. Gradually lessened functioning of all other

sensations, all other thoughts, all other previous or present feelings.

3. A tumultuous, sudden, gushing confluence of all forces upon a single point.

4. Disappearance of all forms of outer and inner sensations.

5. Paralysis and indeed more often catalepsy of all muscles; thence firm and spasmodic persistence of position, which expresses either ultimate dissolution or extreme agitation.

6. An irresistible inclination to raise one's self, even if only with the eyes.

7. Appearance of pictures which compress themselves into a single frame, or a single picture combining in itself all beauty of delineation and color.

8. Final result: a single, thrilling sensation which blends all the lesser ones; a single, thrilling feeling into which all other feeling powers transform themselves.

9. An emanation of light beams, of sublime illumination, from this single point.

10. Trance or ecstasy.

The person who has passed up this graded development, stretches forth his arms and thoughts towards infinity, and inhales with full lungs the ravishing atmosphere of all human sublimity.

Attaining the outermost border of human limitations he sees and dreams of a man who is more than man, greater than he himself, an angel or a god.

The observer, seeing the one in ecstasy, admires him or scoffs at him accordingly as he believes or doubts; he deifies him or commits him to the madhouse, makes him a god or a fool; so closely juxtaposed are the extreme poles of the tangible and the conceivable, so quickly are the tears of joy changed to those of pain, the smile of the child to that of the skeptic, the convulsions of voluptuousness and those of the death struggle, the lyric of delirium and of mental aberration, the inspiration of the poet and the hypothesis of the scholar.

Naturally, real and complete ecstasy must be distinguished from the incipient and twilight forms of it; hence the division into lesser and greater ecstasies. Lesser (*Die kleinen Ekstasen*) ecstasies are quite naturally most frequent, and there are perhaps few men of the higher races who do not at some time experience them.

Music, contemplation of works of art or natural phenomena, many feeling excitements, religion, can develop an extraordinary excitement focused in enjoyment and admiration. Whatever might be the source of the enrapturement,

we feel connected to external things only through the single sensation producing the ecstasy, and we manifest the symptoms of accentuated absentmindedness, absorption. But when on analysis there is found along with attention clearness of consciousness, ecstasy is not present. We can love, admire, feel deeply, but so long as the outlines of the real or fancied picture or the various tones of the music are clear, ecstasy is not there; it comes only when the nervous tension is stressed till pictorial outlines and tonal varieties blend into a single sensation. This is lesser ecstasy, a high order of feeling pleasure too seldom enjoyed. The original cause of our ecstasy disappears, and before our entranced mind passes ravishing pictures, extraordinarily beautiful thoughts, as fleeting and fugacious as they are beautiful.

And here is a very noteworthy point in the history of human thought. When one has thus reached the highest and outermost bounds of perceptibility the force released from the nerve centers must either be entirely expended in the ecstasy itself, or be transformed into work of art, of the pen, the chisel, or pencil. That is to say, the nerve force liberated must be consumed and terminated by the ecstatic condition completing and exhausting itself, or through the checking of the

ecstasy in its incipient stages and transforming the nervous force into action. With women or men of the feminine type, with contemplative natures, every strong admiration, every strong desire can pass into the ecstatic stage, being there consumed and terminated. In real men, however, and all energetic natures, ecstasy in the initial stages transforms itself into useful work.

It is a law of fate that high sensitivity hinders activity, and seldom are poets men of action.

The approach to the greater ecstasy is usually through the lesser. In the development of the greater from the smaller the isolation of consciousness becomes more complete till the highest tension is catalepsy, the highest degree of trance.

Admiration is seldom sufficient to produce the greater ecstasy, there must be passionate affection; hence with rare exceptions the approach to greater ecstasy is through *love* or *religious feeling*,—two great human forces; the one creates, the other adores and hopes. Of these two, religious ecstasy is the deepest. In love ecstasy is always a taint of carnality, be it ever so weak.

Other than the division of ecstasy into degrees of intensity, distinction according to kind is a

natural division. The following scheme of division is suggested:

(a) First Group: Ecstasy of Inclination.

1. Ecstasy of sexual love.
2. Ecstasy of family love.
3. Ecstasy of friendship.
4. Ecstasy of general human love.
5. Ecstasy of sacrifice.
6. Religious ecstasy { Devotion.
Consecration, resignation, etc.
Visions.
Prayer.

(b) Second Group: Æsthetic Ecstasy.

1. Ecstasy of figure and form.
2. Ecstasy of color.
3. Ecstasy of symmetry.
4. Ecstasy of the infinitely large.
5. Ecstasy of the infinitely small.
6. Ecstasy of variety.
7. Musical ecstasy.

(c) Third Group: Intellectual Ecstasy.

1. Ecstasy of acquisition of truth.
2. Ecstasy of creation.
3. Ecstasy of eloquence.
4. Ecstasy of power and deed.
5. Metaphysical ecstasy.

Ecstasy of Animals. Without doubt the animals next lower in the scale to humans experience ecstasy which can be divided into (1) muscular, (2) musical, and (3) æsthetic ecstasy.

Latent nerve forces, transformed motion, are constantly liberated from every point of the central nervous system. These heap up if not used, condense, and remain potential. When the tension becomes extreme the nerve cells can no longer hold these forces in check and they are suddenly loosened in many forms. Now it is a song, now a leap, now running, or an irregular, spasmodic general muscular contraction,—a muscular orgy. But in the midst of these muscular orgies there are moments when motion ceases and the animal is absorbed in a single sensation, maybe one of the simplest. This is certainly a twilight form of ecstasy, for the animal in its absorption, forgetful of surroundings, may even expose itself to surprise by enemies.

Among song birds ecstasy following outbursts of song have frequently been observed, while the peacock, the turkey cock, the rooster, are examples of those capable of æsthetic ecstasy.

With children, men upon the lowest stages of intelligence, and savage men, the same twilight form of ecstasy appears which we have seen in

animals. Our little ones often feel an irresistible impulse to motion; they jump, give themselves over to a disorderly, almost mad muscular orgy; they sing, scream, laugh, stopping at times to drink in the full warm life surging through their beings, oblivious of their surroundings. It is a lesser ecstasy quite similar to that of animals.

Strongly æsthetic feelings are lacking in children but not in savage men.

Not all feelings nor all degrees of feeling can produce ecstasy. For feeling to do so it must belong to the most powerful which shake the heart and be capable of reaching a high degree of tension. Only in rare cases can friendship, love of humanity, brotherly love, filial love reach the degree of ecstasy. Not even father love is likely to reach so far. But the two highest forces of reproductive life can lead to ecstasy; viz, the reciprocal love of man for woman, woman for man, and mother-love. But only under certain conditions and under high tension do these lead to ecstasy,—only when there is intense longing, an overpowering joy, or a heroic self-sacrifice for the loved one.

The ecstasies of longing or ardent desire are continuous tensivity towards a pole of the feeling world, usually gloomily colored by a kind of

poetical melancholy, not seldom associated with deep admiration. The ecstasies of feeling interlace with those of the æsthetic.

The ecstasies of joy or satisfaction are keen but evanescent, for the force is completely transferred to pleasure, and there is brought about an equilibrium between the longing to possess and the joy of possessing.

There is yet a third form of feeling ecstasy, composed of pain, compassion, and sacrifice, wherein the feeling powers are focused in the love of mankind. In this ecstasy the raising of several of the moral elements which complicate this phenomena is essential.

The ecstasy springing from love of humanity is the reward of that love. In this ecstasy we no longer see the various individuals we have helped, but, absorbed in contemplation of human miseries, we feel ourselves the servants of a gracious God, a mysterious providence.

The highest pinnacle of human love is usually attained only upon the wings of religion, great pain, or deep repentance. To do good to men and through tears of pain reach God is the highest expression of religious feeling. The Christian gospel is a textbook of love of mankind, and through that alone it is superior to Buddhism and

Brahmanism. Revenge and doing good are opposite healers of mortal sufferings, the latter far the rarest.

Repentance is another road to the larger ecstasy of love of humanity. Moral law is punished by conscience. Men who do evil for evil's sake, who experience no conscience prick, are rare,—are atavistic reversions to cannabalistic forbears. Others commit sin under sudden impulse and ever afterward carry remorse. The marrow of inspiration is lifeless and fractured. Most men are capable of remorse; it is the first punishment to meet the guilty. Remorse is a sickness from which the rabble heals itself by doing penance at the command of judge or priest; the noble man recovers therefrom only through doing good. This demands great moral power, of which few are capable. The man who through self-sacrificing devotion expiates his guilt and frees himself from the smitings of conscience becomes a god.

Ecstasy of Friendship. Friendship is a feeling of love without the attraction of sex or blood relation. It is possible between those of opposite sex, but sex is a disturbing element. Friendship is a luxury-feeling (*Luxusgefühl*) not found

among men of low physical talents, or is deformed if found. It is weak and easily yields to stronger sensations. Because love and motherhood so largely fill woman's heart, therefore she shows rarer examples of warm and tender friendship. Sublime and true friendship being rare is delicate and enters the realm of idealism. The stamp of nobility is put upon friendship by free choice. There is no necessity, fate, destiny, no compulsion by men, circumstances, or time. From an inner blending of two beings a third life springs, and this union of two human natures can lead to ecstasy, especially when we take refuge in the bosom of Friendship to escape the confusion of the *profanum vulgus*. The ecstasy of two such friends on meeting and greeting is deep and silent. Friendship ecstasies spring from sympathy and consolation.

Fraternal love (*Die Geschwisterliebe*) is often lukewarm and weak. It is strengthened by sex differences. Fraternal love strong enough to lead into ecstatic conditions is usually between brother and sister. Fraternal love is a luxury feeling, hence indistinct with low human natures.

The Ecstasy of Mother-love. Woman as woman is only complete as mother. Motherli-

ness is passion and destiny, love and sacrifice, exertion of thought and offering of the feelings; she is a human creature who offers creatures who live after her; she is the present which brings forth the future.

Such an irresistible human feeling as mother-love must have its own ecstasies; in fact it has many inexpressible joys.

There is no one in whom the sight of child will not arouse sympathy; who, then, can fancy the warm glow of the mother who looks upon her own creature. In her gaze is her soul, she is all smiles, all joy, and the ecstasy is great and complete, at once æsthetic and lovely. It is disturbed only by the agitation of the trembling hands which moving to and fro would become a single caress. Those hand-pats are so vigorous that they become blows, the kisses so fiery that they approximate bites. As the child sleeps in the shelter of the motherly gaze, the ecstasy of the mother continues quietly. Eyes fixed upon their object, breath accelerated to synchronize with the breathing of the child, a childish sigh is answered by one from the mother, a sleep-impelled smile upon its lips is reflected on the mother lips. Heads near together, the two lives represent the interlacing of present and future.

Such ecstasies are the commonest of mother-love, and Australian, European, Indian, and negro are capable of them.

But of still larger ecstasies is the mother heart capable. The mother contemplates her brood, and glows. Now the ecstasy is æsthetic, now it springs from feeling alone; now it is composed of admiration and love; now of thirst for shining devotion in sacrifice of herself. Then admiration, hope, and fear blend in a single indescribable sensation which is the summation of care, tenderness, the glow of motherliness. It is the majestic ecstasy of mother-love.

Father-love is much weaker than mother-love, and only when intensely idealized is it capable of ecstasy.

Ecstasies of Filial Love. With animals the family dissolves when the young cease depending on parents for nourishment. With mankind love of children for parents springs from similarity of tastes, force of habit, thankfulness, and common environments. It is a luxury feeling, for only mother-love obeys a necessity. And filial love is capable of ecstasy which though rare is high. Mother-love is the present generating the future; filial love is the present looking into the past.

It were a useless task to attempt a delineation of all forms of ecstasy for every feeling capable of generating it; but each rapture may be classified on general lines.

All ecstasies are similar; but every feeling impresses upon ecstasy its own signature. Every feeling can develop ecstasies of longing, admiration, sacrifice, but in every feeling longing, admiration, and sacrifice are interlaced in a manner varying according to their natures and the temperament of the person.

The Ecstasies of Platonic Love. In the languages of all higher races is found an expression equivalent to "platonic love." Many definitions have been given. Platonic love is the feeling which unites a man and a woman who, although they desire each other, voluntarily forego corporeal union and experience only union of souls. How far this love goes, how long it lasts is difficult to ascertain; but one thing is certain, its idealism makes it a rare blossom of exquisite beauty and fragrance. It is capable of inexpressible ecstasies, approximating those of religion and mother-love. Only exceptional souls are capable of its sublimity, for it must take place not between old persons or those who cannot desire each other,

but only between those young and beautiful. But souls have sex as do bodies and in platonic love they stand juxtaposed, always looking at each other, without immediate contact, each emitting towards the other streams of light and warmth. The soul of man is composed of power and action, that of woman of grace and goodness; these blended form the whole man, and mutually attract; but in platonic love the attraction is held in abeyance by the obligation which permits them to love but not to touch. Platonic love must be free from earthly pleasure, and one caress destroys the platonic heaven.

It is only the strongest love which can carry one up the heights of platonic ecstasy, for strength alone can detain lust at the threshold of the temple and change the hottest passion into soft moonlight which gives light but does not burn. But strong love is tamed only by death or a miracle, and this miracle is platonic love, which is a great gentle melancholy.

When longing is smothered and extinguished adoration remains, and this gradually refines itself, the memory of fought-out struggles fades, the form we adore loses its personality to become a myth or symbol. The platonically-loved woman is no longer Laura, or Beatrice, but

woman, the one in whom is included all beauty, all grace, all charm.

As in ascetic vision God appears in highest beauty, heightened by ecstatic adoration, so in platonic love the forces of thought and feeling directed upon a single point lend wings to fancy and power to pencil and make of man poet and painter.

The ecstasies of platonic love may spring from piety and the sacrifice which impels to martyrdom. Platonic love may be rich in strong ecstasies.

Religious Ecstasy. To deal with religion scientifically is difficult, for man has not yet learned to think without heart or judge without nerves.

We all know the religious feeling,—though we might not be able to accurately define it—one of the highest, most complicated and indefinite which moves the human brain. It is directed towards invisible creatures, seen only with the eye of faith, and whom we can love more than any of flesh and blood. This property of invisibility is in all forms of religious feeling. The more intense it is the more it separates man from the visible world. The chief goal, the great longing of every

religious soul consists in directing all wishes, all inclinations to God.

The ascetics speak to God in various ways, devoutly, prostratedly, with lowered and pleading faces, and in each way may reach ecstasy. The greater the isolation of the ascetic, the deeper he penetrates the world of fancy, the greater his efforts towards still higher elevations.

Religious ecstasy is not easily gained; not all are capable of it. A first essential is an unwavering faith in the existence of the being we worship, and added thereto must be an excitement of highest nervous sensitiveness, generally termed hysteria. And as the ascetic life demands fasts, vigils, mortification of desire, and corporeal want, the accompanying weakness increases the hyperaesthesia and irritability; hallucinations, somnambulism, catalepsy, alternate and present grotesque or sublime pictures; often both. People call these matters of fact miracles; science explains them by physiology of the nervous system.

Detachment, submersion of all feelings and thoughts in love for an invisible being believed to be all perfection, all great, all powerful—such is the foundation on which religious ecstasy raises itself.

Devotion is a warm strong love accompanying deep, even fervid, admiration. In the earthly world devotion is the highest degree of love; in the religious world it is the usual form of love man feels for God and other supernatural beings. People revere God through the form of Christ, more seldom through that of the eternal Father or of the Holy Ghost; through a martyr of sublime beauty,—a venerable old man, a dove floating in a halo. Where the eye beholds something, there love can fix itself, and caress, embrace, kiss.

The reverence of God and of heavenly things is a power which never exhausts itself because it is not transformed into work. It is a higher form than platonic love, for it lacks carnality and is directed on other than human creatures. It is an eternal longing because directed upon an eternal being; it is infinite because it floats in the vacancy of time and space, and has for horizon only the hope of union beyond the grave with the beloved Being. But the believer's powers are finite, human, and he loves with the senses and heart. Nothing is so similar to *love* as *religious* ecstasy.

A comparative study of the ecstasies of Saint Therese and the most exuberant passages of Dante's "Paradise" would afford rich material for the comparative psychology of the sexes. In the

reverence of the woman lies more feeling, in that of the man more admiration. The woman loves God with more carnality, tenderness, passion; the man with devotion, reverence, with more intelligence than love. Intensified by her powerful love-power woman more readily reaches ecstasy in reverence than does man. With both reverence leads to ecstasy only through absolute chastity.

Ascetic ecstasy begins in devotion. First there is praise for the omnipotence, the omniscience, the compassion, the divine goodness and indulgence, the superlative beauty of the Most High; then there is detachment from consideration of the separate characteristics and consciousness centers on ecstatic admiration. We lie in the dust, head depressed, body bent down, as if to occupy the smallest possible space, only the eyes are raised, as if not to lose one moment's enjoyment of the divine countenance of Him who absorbs within Him the whole conceivable world; in whom even we are absorbed, like a grain of salt in the ocean. How poor and miserable earthly love appears to us in such divine ecstasy. In our refined reverence we do not love a human creature, not a beautiful creature, but beauty itself,—we revere the Mighty of the mighty, grace, goodness, wisdom in their perfection.

Devotion includes prostration, termed by others resignation, humiliation of the creature before the creator. This prostration is not only an expression of Christian meekness, but a natural form of very strong love. So long as we remain erect and with brawn and brain magnify the *I*, so long can one neither possess nor absorb us, nor can we possess or absorb. Energy, pride, are forces, but they are not devotion, absorption. Pride is the greatest isolator in the world, and in order to love aright and much, pride must be sacrificed to love. Where pride rules, there strong love and ascetic ecstasy are not possible. Hence Christ said, Only little children can enter the kingdom of heaven. Humility is fundamental to Christianity. To conquer pride means long ascetic training.

In ascetic life ecstasy of prostration scarcely differentiates itself from that of devotion. They usually blend. The one or the other predominates according to the psychical characteristics of the person. Woman will oftenest tend towards prostration, the man to devotion.

The Ascetic Vision. The prostrated devotee, the "knees of the soul bent," cannot maintain the condition of ecstatic hypnotism without expe-

riencing hallucinations and visions. They are visions when we during their continuance understand them to be purely mental pictures, hallucinations when we hold them to be genuine and do not by reason correct the deception of hypnotism. In ascetic ecstasy, cut off from outer environment by concentration of consciousness upon a single thought or feeling, under complete hypnotism, the doors of the mundane world are closed to us and those of the heavens open before us.

Somnambulism, delirium, extravasation of blood, convulsions, catalepsy, and other pathological phenomena may accompany religious ecstasy, but not essentially so.

Ecstasy is an extraordinary condition, long duration or frequent repetition of which will cause psychical and physiological derangements. The ecstatic is no lunatic, but stands at the place where height and depth touch, where genius and insanity jostle each other, though perhaps not just as Lombroso has held.

Prayer. A tangled phenomenon of intricate psychological processes, prayer is difficult of analysis, but all the elements of religious ecstasy may enter it. Prayer from earliest forms of religion has remained essentially a petition. To

pray is to petition. That humiliation, a bowing to a stronger one, to the Strongest of the strong, asking to be granted what we ourselves cannot attain; it means thankfulness to and love for the Giver, to submerge one's self in deep reverence which comprises hope, gratefulness, admiration. Man has always found in prayer much happiness and consolation. Many suicides have been prevented, many crimes unperpetrated, much family happiness promoted by man's faith in prayer,—not mere ritualistic prayer, but true, warm, ascetic prayer which first prostrates the soul, then the body, humbles all feelings, our mental powers before God. To pray is to have hope and faith in a great Being of justice, love, virtue; to revere a Being never seen, only thought of, the Source of all goodness. Be the praying one not deeply earnest and sensitive, he reaches only the twilight conditions of ecstasy; but the trained ascetic soars straight to his paradise of ecstasy. To mount there means spiritual assiduity. Every human endeavor has its plains, its hills, its mountains, the clouds,—and over these, heaven!

Prayer alleviates pain, lessens despair. When hope is gone then faith weakens, but prayer turns

despair to resignation. Hope and resignation,—two guardian angels of life.

There are religious ecstasies for which devotion, vision, prayer do not form the sole basis, but into which other but less important elements enter. Less important, they are more apparent, superficial, and hence to them are ascribed by the masses the origin of ecstasy. This confusion of the varnish for the essence, the form with the structure, is to be found in all studies of the essence of religion.

The secondary elements of many religious ecstasies arise from certain sensations of sight and hearing, more seldom from smell. Church architecture and decoration; odors of incense; vocal and organ music, all have played their part. Perfumes, tones, and colors blend to form the scene of religious observances, be it high mass, a procession, or jubilee.

To-day the greater religious ecstasies are rare. History affords many illustrations of noteworthy ascetic ecstasies.

Ecstasies of Patriotism. Patriotism is a deep but indefinite feeling of the luxury group, for it is quite lacking with many men of all ranks, and because it relates not so much to an expanse of

land as to a myth composed of idealism and realism which according to time and many other extraneous influences changes its form and boundaries.

For the savage, savage either because of unclothed body or unclothed mind, fatherland is little more than an abode. Not to love fatherland is a misery of the heart, a cretinism of the feeling.

Patriotism is at once filial and mystic; filial because the fatherland is the common mother; mystic because one cannot caress or embrace it.

The fatherland is the land of our forbears, the history of the past record of our ancestors; it is the land whose name when heard in a foreign country sets the heart pounding, causes us to kiss a newspaper. That word at the call to arms raises up waves of men, calls forth from every hut an armed man and leaves at the window a weeping woman. It is a magic word which can change every man into a soldier, a woman into a martyress, or make children weep because they are not men and old men weep because they can no longer carry the rifle.

The most usual ecstasies of patriotism are those experienced by the returning traveler on seeing the fatherland again after long absence, and those enjoyed at great national rejoicings

over national glory or triumph. The first are individual, the second shared with many. Both are capable of great and indescribable bliss.

Individual ecstasies of patriotism must come to those chosen few born to gain for the fatherland freedom or greatness, who first dream of, then meditate upon the great work fixed as their life's goal.

But the ecstasies of patriotism are not reserved for heroes alone. All who have loved the fatherland, who have consecrated to it their thoughts and their blood can enjoy the rich ecstasy. One can bring to the altar of feeling no greater offering than one's self. The number who through war, revolution, political struggles, love and work for the country is legion, and history forgets them just because they are so many. History is in a hurry and therefore represents the many small martyrs by a single person. For every form of sacrifice, etc., history designates an individual as a type and this individual becomes an idol.

The greatest joys of life are not measured by the meter of genius or upon the scale of riches. None is too poor to sacrifice for his country, none is too unfortunate to enjoy its ecstasy.

Small sums become great when added; so weak feelings added or multiplied become tempests.

And with no feeling is this more true than patriotism. How do two similar or equal feelings summate? Not by mathematical formula. How does inspiration multiply itself when it appears simultaneously in a hundred, thousand, hundred thousand hearts? Not by rule of numbers. There are epidemics of feelings, and the dissemination of inspiration (*Begeisterung*) is equally as mysterious, shows the selfsame leaps, the same miracles, and the same diffusion as do great epidemics of disease.

The kindling of the heart through a national glory is one of the greatest and most inciting spectacles of the human world, where a whole people joyously sing together the electrifying hymns of victory. How the multitudes roar in the drunkenness of so many hearts sensing simultaneously the same joys, inflamed by the same delirium of fever!

Various Lesser Ecstasies. Love for animals may under certain conditions become strong enough to develop the ecstatic state. Some civilized (?) people with their dogs, the Arabians and the Gauchos with their horses, the Kaffirs and many other Africans with their oxen, the Lap-

landers with their reindeer, afford cases in evidence of such ecstasy. These somewhat rare cases of ecstasy, if not pathological aberrations, appear to belong more to the sense of beauty than to inclination, or to both at once, while they otherwise associate with other sensations.

Riches. The avidity for wealth may serve as a natural transition to pathological trance which degrades rather than elevates. No one is witness to those individual ecstasies which the banker, the millionaire, the avaricious enjoy when they "reckon up" their possessions or let pass through their fingers those to them eloquent bits of paper—bank notes and "bills receivable." For the miser the gleam of gold is more dazzling than the light emanating from the eyes of the love god, and the feel of a bank note more voluptuous than that of the rosiest and most velvety flesh of the child. Contemplation of the condensed potentiality of his accumulated hoard may produce ecstasy in the miser, or in the poet and philosopher in contemplation of the miserableness of it all. From such contemplation one succeeds step by step to the real ecstasy of the miser which substitutes the other ideals and can indeed replace the other joys of life. The passion becomes a vice, vice a mania

which dominates the whole field of sensation, the whole realm of thought.

Even hate, cruelty, all human vices are capable of ecstatic states.

Æsthetic Ecstasies. Beauty is one of the highest things within the reach of man. The philosophers in their search for the foundations of æsthetics have soared above the clouds, becoming more confused the higher they have mounted. Had they been content to look around them and consider the simplest æsthetic facts, they perhaps would not have seen in their field so much fog and metaphysics, two words quite the same in meaning. Widely as the definitions of the beautiful differ, there is one constant characteristic, viz, the *pleasure* afforded by the beautiful. There are many kinds of pleasure which the sense of beauty does not influence, but for us there cannot be beauty if it does not afford us pleasure.

Beauty is a subjective fact and a sensation. A thing may be beautiful for all; but if it does not please us, then for us it has not beauty. On the other hand, beauty does not constitute the whole feeling, but is only an element of it.

Beauty is a great factor of progress. Natural beauty deeply stirs us, stimulates us to attempt its

representation,—to create a work of art, which is vigorous only when it springs from beauty. And this work of art generates on its side new offspring—other things of beauty. In the field of morality also the beauty of heroism and other great deeds attracts and stimulates us to produce other moral beauties.

Beauty is fruitful only when it represents the rightful union of these two elements; a beautiful nature and a human brain capable of comprehending and loving it. The warmer and heartier this love, the more fruitful the union.

Beauty has from the first been a concomitant of man's progress, from the first lines drawn upon neolithic pots to the paintings of Raphael and Titian. Literature, industry, art, morals—all preserve a strong image of the æsthetic power of a race, a people, a time. And before the creations of nature, art, music, man stands full of admiration and joy; an enjoyment which can become powerful enough to lead to ecstasy.

With the rare exceptions noted the ecstasies arising from the senses are limited to the æsthetic and musical. Hence the æsthetic ecstasies fall into a natural division: (1) Ecstasies through nature beauties; (2) ecstasies through works of art; (3) ecstasies through musical beauties.

Only rarely can admiration for the beautiful produce the larger ecstasy, but often through it do we enjoy the intoxication of the lesser ecstasy. Even when the artistic mind and the psychological condition of inspiration are present one attains to ecstasy only before the objects which please him.

Everyone knows what an artist is though perhaps unable to academically define it; but what is inspiration (*Begeisterung*)? It is an especial quickness of reaction to external impressions. They may relate to beauty, feeling, or intelligence. All sources of joy, truth, goodness, beauty, fame, every human feeling can develop within us those sudden impulses which stir up admiration or love, warm us and catch us up into the heights, intoxicate us. Fortunate those who are capable of such trances, for not only do they weave a golden thread through the fabric of life, but inspiration (*Begeisterung*) for the beautiful safeguards vulgarity and discouragement. And a people without such enthusiasm in some is dead or dying.

Painting, sculpture, architecture, poetry, can all open the closed paradise of the beautiful and lead into the perfect temple of beauty; so can man, plants, mountains, plains, sea, the heavens

alternately entrance and intoxicate us with colors and gigantic sights and plunge us into the boundless ocean of beauty. The beautiful is beautiful and divine because it sends its roots into the deepest tissues of the mind and stretches its branches and foliage as far into the heights as the wings of thought can reach. The beautiful is the superlative of the superlative of sensation, feeling, and thought.

The Nature Ecstasies. Sea and sky have intoxicated men more than every other natural beauty; for they are boundless, though not in the same way. Many hymns, in all times, have been sung to those two expanses of blue spread out below or overhead. And however winged the genius of the poet or strong and skillful the brush of the painter who would portray them, all modestly confess their impotency. The sea intoxicates us by its immeasurable greatness, dominates us by its ceaseless motion, while its voices are numberless. Multiplicity of color, restlessness of motion, boundlessness of horizon, mirror of earth and sky, the sea includes in a single picture such wealth of beauty that it can agitate an idiot or confound a poet. A hymn to the sea always begins with a silence and a cry without words, for

the sea at once produces too much sensation to set them to words and notes. And at the base of this ecstasy always lies melancholy awakened in us by things too great or too beautiful for us.

The sea is divine, the earth infinitely beautiful, but both must be united to present the most intoxicating scenes of nature.

Even the land alone, rich in color, abounding in the picturesque, can entrance and enchain in ecstasy. And the sky, perhaps more than the sea, especially the night sky, can produce ecstasy, in contemplating its great expanse, infinity of worlds set in the glorious vault of heaven.

Ecstasies Produced by Flowers. Among living creatures flowers most frequently afford material for admiration and trance. Neither children nor aged persons, the man of genius nor the uncultured, can contemplate a beautiful flower without experiencing a pleasant excitement which under the right conditions can reach entrancement. In Linnæus was combined the genius of a great nature observer and the fine feeling of a great poet. In his Lapland journey, when he first found a *Calypso borealis* he knelt before this royal orchid which appeared to unite within itself all the beauty of the polar flora and

thanked God in rapture that he had produced so beautiful a creature.

The Musical Ecstasy. Music is one of the greatest human creations. It ravishes with a bliss equal to love cramps (*Krampfen*) and the tenderest feeling-excitation; and yet we can enjoy this bliss daily and for hours together give ourselves up to it, and refine it through long devoted practice, without giving cause to be called vicious, without injury to health or paralysis of members. Doubtless music enjoyment knows a fatigue, but only by the use of nerve and brain material, but this use wears out neither nerves nor brain as do so many other phenomena of sensual pleasures belonging either to feeling or intelligence.

The music sensation can more easily than any other lead to ecstasy, and this is true upon several grounds. The musical enjoyments are among the strongest and most indefinite, with strong expansive force.

Hearing is above all the sense of feeling; the eye the instrument of thought. The ecstasy of sight is especially intellectual, harmony-ecstasy chiefly concerns feeling; and this alone is sufficient to explain the great frequency of musical

ecstasy compared to those which depend upon the seeing sense.

In musical ecstasy the entrancement is colored and inspired by the psychological conditions prevailing and displays as much variety. Music intensifies the mood in which we are when it is heard. Each person is excited by music in a manner peculiar to himself. And among the forms of musical ecstasy thus depending upon a definite mental condition may be distinguished four; (1) the amorous, (2) the melancholy, (3) the pugnacious (*kampfflüchtig*), (4) the visionary (*phantastische*).

In the musical amorous ecstasy we feel the need of loving; if in love to love more warmly and strongly.

For many who are inclined to sadness music is always melancholy.

The eager-for-the-fray (*kampfflüchtig*) musical ecstasy is rarer and of less duration than the two foregoing. Under the form of a lesser ecstasy it is that which impels timid troops against the enemy or against the entrenchments of a fortification. Trumpets, drums, and martial music are just as good instruments of war as cannon or bayonets, and music has often contributed to victory.

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But off the battle field, around a piano, or in a concert room can one from ecstasies, musical and *kampfllüstig*, gather courage and power to struggle against the enemies of life or to enter political or literary contests.

The last form of musical ecstasy is difficult to define. Under its influence we are neither in love nor sad nor enjoined to fight against man or things, but are carried far into dreamland where we see or dream new worlds with new creatures; but the harmony always accompanies us and lifts us up into the ethereal and variegated regions of fancy.

The Ecstasies of Thought. Only a few select persons with whom work is a passion and who thirst for truth can experience certain raptures. For the majority work is punishment and life's ideal consists in doing as little as is possible.

In no other passion do individual peculiarity and independence count for so much as in the thirst for truth. It is a sublime egotism (if we may be permitted to connect these words) wherein the *I* brings into play its whole power and capacity. It is the most subjective of all passions.

Genius is the fruit of elements unseen by the

superficial observer, cooperating so strongly that at times little extraneous stimulation is needed. Indeed, adverse external conditions may even strengthen the tendency, for before the genius stands truth beckoning him constantly. The more painful the sacrifice, the greater the hindrances, the stronger becomes this love for truth.

Curiosity, the irresistible itching for knowledge of new things, which is the germ of love for science, has reposed in the breast of every man since Eden. From this twilight form it rises as a great passion to the pinnacles of the thinkable. But no man is capable of scaling all these heights. Each is born with certain equipment adapted for mounting certain ones and not others. He who were capable of mounting all would be no longer a man but a god.

Truth is found not alone in the nature world, but in history and art, and there is æsthetic truth, and moral truth, and a truth which consists in criticism of truth. And in the laboratories and museums (*museen*) there is a whole host of quiet ecstasies. Often, after long and painstaking search there lies before us as a result of our industry the whole fabric of our constructive endeavor, and in contemplation of it we experience the ecstasy of the truth we sought and brought

to light. There are many keen, deep ecstasies in the secret watches of the night by the study lamp.

The Ecstasies of Fantasy. There are found other abysses than those of mountain cliff and glacier; they lie beyond the clouds, beyond the breathable air, beyond the world visible to the naked eye or one armed with the telescope. They are the abysms of the conceivable, to which the human fancy is prone to carry itself in ecstasy, in order, as it were, to inspire the atmosphere of a better world. Fancy is the strongest winged of human capacities and carries us to a higher, broader, deeper world than are those penetrated by the telescope. Each dreams his own fantasy according to the nature of his own brain and special stimulation to which he is subjected; for our fancy magnifies or reduces, just as the telescope enlarges or reduces according as we look through the ocular or objective.

Those weak of imagination can strengthen it by opium, hasheesh, coco, or one of the several other narcotics, to bring about artificial fancy-ecstasies. These visions are even richer in color and form than the natural ones and constitute the highest form of enjoyment of perhaps one half those who inhabit the east half of our planet.

The rich-in-thought orientals who consume no power in the battle of thoughts have turned all this power to fantasy. In oriental poesy this over excitation is discernible and in Persian and Indian poetry one can readily point out the influence of opium and hasheesh. Fantastic ecstasy is usually complicated with other feeling or ecstatic elements.

The Ecstasies of Eloquence. After a description of the psychological signs of ecstasy in speaking and listening Montegazza says that whether the listeners be few or many the speaker must have won them all in order to melt them into one charmed, compact individual, a captured public, before he can make claim upon ecstasy either for himself or his audience.

Ecstasies of Contest and Power. He describes four men, Cavour, Bismarck, Garibaldi, and Moltke, and surmises their ecstasies in contemplating their power and their accomplishments.

The will, which because of its importance was early classified as one of the three fundamental forces of the mind, is perhaps a capacity possessing no separate organ or a separate function of

a definite part of our brain, but functionizes very probably when the efficients of the forces accumulated in the nerve cells are set in motion through an extraneous stimulation.

Though will power is the moment of many known functions of the brain, yet it is so different with various men that it suffices to distinguish between the weak and strong, the impotent and athlete; to be able to will (*wollen zu Konnen*) and will to will is the first essential of a great character, the first virtue of a man of deed.

To feel is well enough, for much feeling means accumulation of material which fits for much work; to think is better, for it means an orderly group arrangement of the pictures recorded by our senses; but to will is best of all. One little thought which wills is more useful and effective than a hundred big thoughts which do not will or only weakly will. Many men observe, gather, arrange, but with little practical use. Men of action on the other hand, act, form, force, bend all to their will.

After a combat in parliament or a battle with cannon a victorious minister or general can enjoy an intoxication of ecstasy. "I have willed and have been able," is a superhuman, a divine cry.

The Ecstasies of Creation. Man has brought forth two creations; the one Moses has created, the other Darwin. These two names corporify (*verkörperen*) not two historical truths but two juxtaposed systems which apparently contradict but which really meet, for they are both theological. The Mosaic history of creation is sublime and poetical; Darwin is confused (*verfahren*) with the creation, like Luther with Christ; science gets on well (*vertragt*) with faith. The God of Sinai speaks with the voice of thunder, the other speaks scientifically; the first brings order out of chaos by his breath, the other like an experienced practical manager.

The creator when he pauses before his creation falls into ecstasy, be the newborn a world, a poem, a statue, a painting, a science, a theory, or a temple.

Without a warm, strong love there is no creation in the world of creating, no birth in the world of art. A statue, or a book, or a painting, or a melody, is thought of in a flash, that is the beginning. Fleeting as this flash may be, it can shake all the fibres of brain and heart, and suffices to throw us into ecstasy. The creative inspiration is with every work of art. In the world of thought the highest ecstasy is that of creation.

Chapter 5

Peyote Religion.

Some years ago the writer became interested in a question involving the use among the American Indians of a species of cactus in certain ceremonies of a religious nature, varying somewhat among the different tribes, the ceremonies in general being called the "Mescal religion," a term derived from "mescal button," as the dried plants are designated by some, though they are wholly different from the plants from which the well known Mexican drink *mescal* is derived.

My interest was aroused by coming in contact with Mr. Philip Cook, a member of the Oklahoma Cheyennes, and Three Fingers, a chief of the same tribe, who told me of the ceremonies and the extended use of the plant among the Oklahoma tribes in particular and the American tribes in general, they insisting that the adoption of the "Mescal religion" by the American Indians was universal. Their immediate object in presenting the matter to me was to convince me not only of the rapid extension of its use among the Indians of the United States, but also to demonstrate the firm hold which this religion, so

strangely fascinating to the Indian, has taken upon the Oklahoma tribes and the Cheyennes in particular. They were emphatic in their assertions that neither the missionaries among the Indians nor the combined efforts of the Government agents and the missionaries had succeeded either in checking the spread of the religion or stopping the traffic in the plant, and that in all probability the Indians would not abandon the religion until something in their opinion equally as good and effective in a religious or ceremonial way is substituted for this strange cult.

This insistence by these worthy representatives of the aboriginal Americans, upon the universal extent of this movement among the Indians and the tenacity with which they held to it in the face of the combined opposition of the various church representatives and the governmental agents, greatly aroused my interest and I determined to learn more of it. It is not the purpose of this treatise to give more than brief mention of some of the results of the investigation that followed, and that brief allusion only because by a concatenation of events not entirely fortuitous that subject, interesting as it is, has proved to be but the introduction to a larger one. And in that it has thus proved to be an approach to the larger and more

extensive subject do I find my justification in asking the reader's forbearance in presenting here something in general of peyote and the strange religion which centers around this rather insignificant appearing and certainly unimposing member of the great cactus family.

The logical order for presenting in outline the Mescal religion might appear to be to begin with a description of the plant which enters so prominently into the ceremonies, its botanical position, its habitat, and its chemical composition in its physiological, therapeutical, and psychological effects. But for reasons which may appear later it will here serve our purpose better to give a short historical sketch of the Mescal religion.

So far as modern tribes of Indians are concerned this religion can undoubtedly be traced to two tribes quite widely separated in Mexico,—the Tarahumares and Huichols. Their widely separated habitat and the apparent improbability of intercourse between the two tribes, together with the striking similarity of the ceremonies and their terminology lends strong color to the theory that to these tribes the religion came from a common source, some tribe probably now extinct, a theory borne out by several traditions among these tribes, which is further strengthened by the

fact that at least one name applied to the plant bears a strikingly close philological relation to an Aztec name similarly applied.

But that is beside our question. From these two tribes the ceremonies have spread northward and eastward, first to the Indians of the Southwest, thence to Oklahoma and elsewhere. It is doubtful whether the spread is so wide as indicated by the statements of Cook and Chief Three Fingers, for to some of the northern tribes the religion is yet unknown. On the authority of at least two chiefs of the Chippeways of Minnesota I can state it is unknown to them. Its exact extent has not to my knowledge been determined.

Among the Huichols and the Tarahumares the ceremonies of the cult cover not only the use of the plant in the religious ceremonies proper when it is eaten, but in the gathering of the plant as well. And this latter is not unimportant, for the habitat of the little cactus is removed from the homes of both tribes by a long and very arduous journey made vastly more arduous by the rigorous religious duties demanded of the gatherers. For a number of days before starting on the journey the members of the party, eight or ten or even more in number, enter upon ceremonial duties

and restrictions demanding definite taboos, self-denial, etc.

From the hour of the preparation for the journey, at the beginning of the excursion, and to the end of the trip, and for a number of days after the return, some twenty or thirty days in all, every act is ceremonially determined. A definite order of march is rigidly maintained, no one being permitted to leave his place without ceremonious consent. Each meal is eaten, each camp established, the disposition of the sleepers, everything determined and carried out by ritual. The first plant is ceremoniously pulled up and a certain number of the first ones gathered are eaten, and under its influence, heightened by the rigid food regulations and fastings, the rest of the trip is made.

Careful preparations for the *hikuli* exercises, the principal part of the Mescal religion ceremonies, are made for some days in advance, after a sufficient supply of the peyote is guaranteed by a successful gathering excursion. The exercises may extend over some days, beginning each night at sundown and lasting till sunrise. In general the ceremonies may be said in brief to consist of the following: The devotees gather into a tepee or hut or lodge, and sit around a center slightly elevated on which are placed certain ceremonial

objects. Songs accompanied by constant drumming are indulged in as the worshipers, as they may well be called, slowly consume a sufficient amount of the peyote to produce the looked for effect. By its influence, aided by the mental attitude of the partaker, not to say anything of the ritual itself, a peculiar and ecstatic state is produced in which beautiful visions are seen, and the Indians themselves declare that wonderful and beneficial therapeutic effects follow the ceremonies and the use of the plant.

It is difficult to account for the rapid spread of this religion among the American Indians, especially when it is remembered that the United States authorities have prohibited the peyote traffic, and to secure a supply is made difficult by the fact that it, so far as is known, grows in a somewhat limited region, viz, Southwestern Texas and Northeastern Mexico. But the Oklahoma Indians and other tribes get it, as Mr. Cook told me, by the very simple expedient of sending a man with several trunks to El Paso, and from there he goes to where it can be gathered. But it is becoming more difficult to secure the plant in the quantities used, and the lack of supply to meet the growing demand may eventually prove an effective check to its spread.

I have at times expressed to Philip Cook my interest in the subject and have eagerly listened to his description of the ceremonies and his elucidations of the efficacy of the plant and its intimate relations to the Creator or the Great Spirit who after all seems to be the center of the Red Man's worship in the final analysis of their religion, and I probably at some time expressed a desire to accompany them on one of their excursions to secure the tribal supply; for not long ago I got a characteristically Indian letter from him in which he said the supply was getting low, and the task of securing it was increasingly difficult; that he was preparing to go for another supply and would be pleased to have me go along, and, he added significantly, as the plant must be gathered by ceremony it would be necessary for one who knew how to do so to go, so in true Indian style he suggested that he would be glad to have me help him to go, for he accompanied the invitation by saying that when we had gathered our supply, Chief Three Fingers would set up a peyote tepee and we three would "go in and pray to the God in Heaven."

The mescal button is in brief the top part of a small cactus which grows, as said before, in Southwestern Texas and Northeastern Mexico. I have

seen it growing only once, a transplanted specimen at the Carnegie Deseret Laboratory near Tucson, Arizona. Like many others of the cactus family it has a variety of names, given by different authorities, among which are the following: *Anhalonium lewinii*; *Anhalonium williamsii* var *lewinii*; *Lophophora williamsii*; *Lophophora williamsii*, var *lewinii*; and even *Echinocactus*. But perhaps by any other name its produced visions would be as entrancing. Its description I shall not attempt here.

Chemically studied by Ewell, of the United States Department of Agriculture, under Doctor Wiley, it seems to yield two or three alkaloids, and to these are due its physiological, psychological, and therapeutic effects, and its pathological as well if it has any, which seems doubtful. The psychological effects are, as above mentioned, to produce color visions, and even of bright elysians. Doctor Wiley in a letter to me relates an amusing experience he had with Doctor Ewell while the latter was under peyote influence. Doctor Ewell, (though an agnostic) while under its influence argued verbosely that there was a heaven, because he saw it.

It is doubtless for this effect that the Indians take it. But this leads me to revert once more to

the question of the spread of this cult. That it is as widespread as Cook thinks, is doubtful; that it has spread rapidly the past few years and that it is still expanding its borders cannot be gainsaid. Mr. F. W. Hodge, of the Bureau of Ethnology, with whom I discussed this question in his office, asserts not only that has it spread far and is going farther but that the movement as a study becomes of prime importance to ethnologists by reason of the fact that this religion has in various tribes caused the abandonment of traditions which have been tenaciously clung to for three hundred years; and that in some tribes the community life has been entirely changed since the advent of and because of the newer religious movement. Why has it thus spread? What is there in it which takes such a firm hold on the religious nature of the Indian tribes? I am disposed to think that while the Indian childlike propensity to do the thing prohibited may to a small extent account for it, the real answer may be found in the ecstatic state which is produced in the ceremonies, and which thus fills a gap or vacuity left by the abandonment of other religious forms, such abandonment having been forced upon them by the advent of civilization and its concomitants.

And this indicates our next natural step in this

treatise, viz, a brief glance at some of the religious activities of the American Indians and other tribes to see how far this ecstatic state functions in their tribal life.

Chapter 6

Ecstatic States in Primitive Religions.

It is first necessary here to say something of the scope of the term *religions*. It is perhaps easier to classify religions into two great classes, right and wrong, or mine and the other fellow's, than it is to analyze religion into various constituents; but it is safe to assume all will grant the division into what one thinks about the unseen, or his theology, and what he does as a result of this thinking about the unseen, or his ritual. They are of course closely related. These are both greatly affected by an individual factor, emotion, his fear of, hope in, and love towards the unseen forces whose good will he desires or whose wrath he would appease. Rites of a religious character, though blending in practice, may be either symbolical and expressive, which Tylor terms "the gesture language of theology," or the "means of intercourse with and influence

upon spiritual beings.”¹ As for the sacred rites of the primitive cults Tylor presents them under the classifications of “the rites of Prayer, Sacrifice, and Fasting and other methods of artificial ecstasy, Orientation, Lustration.”² Of these it is not necessary for us to enter into any discussion except in the case of the third, or ecstasy, as bearing on our problem. Tylor holds that the beliefs of the lower races were based largely on the evidences of dreams and visions which were looked upon as actual intercourse between human and spiritual beings. He holds further that in religions which have developed from early phases of culture, in all stages physical ecstatic states have played a conspicuous part.³ Besides fasting as a factor in producing this state may be mentioned: (1) Fasting accompanied by long solitude. (2) The use of drugs and plants containing narcotics and other alkaloids. (3) Bodily exercises and repetition of certain words, causing swoons and ecstasy.

Mooney declared that the American Indian is essentially religious and contemplative to the de-

¹Primitive Culture, p. 362.

²Ibid., p. 364.

³Ibid., p. 410.

gree that almost every act of his daily life is regulated by his religious beliefs.¹ Doubtless these religious rites of the Indians should be called more than mere superstition, as some have declared, yet it is more than probable that by some the savage mind has been credited with a larger religious reasoning power than he really has.

For the purposes of our examination it is not necessary to define religion more closely than to say that it is the conscious attitude towards unseen powers or beings believed to have influence, benign or malignant, upon the believer.

It was formerly held that striking similarity between geographically separated religions indicated a historic connection between the peoples concerned; but more recently it is held that these striking similarities simply indicate the wonderful uniformity with which the human mind works under similar conditions; that is to say, given similar conditions with peoples widely separated and from those peoples will be wrought results which are similar. This view premises a psychological basis for religion. This cardinal and basic truth holds equally true for the arts, the law, and social institutions. This of course does not

¹"Sacred Formulas of the Cherokees," Annual Report of the Bureau of American Ethnology, 1885-86, p. 319.

preclude borrowing, which is an ethnically important phenomenon. The importance of the study of primitive cults from which may have evolved the higher ethnic and universal religions is similar to the importance of the biological study of cell formation and structure of the simplest living organisms to discover the basic principles underlying the activities of higher structures.

The primitive savage man is characterized by simplicity of mind and rigidity of belief. Added to this is nervous susceptibility much keener than ours. Their reasoning powers are controlled and their actions directed by the emotions or feelings. Neurotic disorders, especially contagious ones, are not uncommon among them. In general they are more inclined than we are to yield to sensory impressions. Castren, the traveler, tells how a sudden blow on the outside of a tent occupied by Samoyeds will sometimes startle the occupants into spasms; and Livingstone pathetically tells of young slaves who died of "a broken heart," when they heard the music and songs of villagers whom they could not join in the revelry. The undeveloped mind seems characterized by two traits which are common among civilized people and quite universal among savages, viz, accepting

the idea as being subjectively true, and subordinating reason to feelings or emotion.¹

While Spencer and Lord Avebury (Sir John Lubbock) declare that there have been primitive races which have been without religion, Brinton asserts quite to the contrary, saying that the statements that there have been races of primitive peoples without religion have been based, so far as evidence is concerned, upon the reports of missionaries and travelers who have been untrained and unscientific observers. Without doubt religion takes a deep hold upon the savage life; and much of the savage's activities are governed by ceremony.

The theories presented in attempts to account for the universality of religion among all tribes of men are varied and conflicting, and it is rather beside our task to present them here. We shall therefore pass to an examination of some of the ceremonies in primitive cults in which states of ecstasy or their approximation are produced or appear.

The Ghost Dance.

A discussion of ceremonies among the American Indians producing, or in which appears the

¹Brinton's "Religions of Primitive Peoples," p. 15.

ecstastic state, ought at least to briefly refer to the Ghost-Dance Religion which some years ago had such an astonishing spread among many of the American tribes and which played such an important role in the Sioux outbreak of 1890.¹

Hesunanian was the expected Messiah of the Indians who would come to redeem the American Indians, and restore their lost prestige and give them again control of the lands. All the dead warriors would return at a given time from the Happy Hunting Grounds, and joining the living remnants of the broken tribes would in fierce and sudden onslaught drive the white usurpers out of the land or destroy them. This hope of restoration to their golden age became their faith. As is stated in another part of this treatise, the religion of the Ghost Dance, its teachings, rituals, songs, had been revealed to a young woman of the Algonquins. The first dance was held on Walker Lake Reservation, and the religion spread rapidly from tribe to tribe, new features being added to it by the various tribes. It took great hold on the Indians.

¹James Mooney, of the Smithsonian Bureau of Ethnology, spent some three years investigating this strange religion and the Bureau published his investigations in full in its 14th Annual Report.

The dance itself is a slow, rhythmic, circular one, with a "dragging step," kept up for hours. One after another of the zealous dancers becomes ecstatic, finally reaching a state of catalepsy, when they remain standing rigidly fixed, or fall. In either case they are carried off from the dancing ground and allowed to remain in this ecstatic condition undisturbed. Coming out of the trance they tell of their dreams and visions and what they heard, always sure of eager, attentive listeners.

After the Sioux outbreak the Dance gradually died out. The failure of the dead warriors to make good in coming to the succor of their struggling descendants under Sitting Bull's lead may have had much to do with the loss of faith in the religion.

Initiation Ceremonies.

Among the American Indians, wherever the white man's methods and customs have not changed in a great measure the tribal manner of living, the food supply was practically communally owned. Refusal to share one's food with his fellows, or even a stranger, was so contrary to tribal customs that it was extremely rare or quite unknown. Tradition, custom, and com-

munity sentiment all declared food to be common property. Naturally, therefore, the most valuable men to the tribe were those who could supply the greatest amount of necessities. Surrounded as most tribes were by almost multitudinous dangers, next to supplying food in importance stood the matter of protection; so the men most skilled in hunting and fishing and the women who could produce the most corn or gather the most fruit or seeds were the most valuable members of the tribe; while close to them in importance in the community life were those individuals whose alertness and keenness enabled them to foresee, and therefore forewarn the tribe of dangers threatening the tribal life or peace, and whose prowess could do much to ward off danger impending. And the skill, ability, industry, adroitness, keenness, cunning, alertness, or prowess of these welfare-conserving and community-interest-serving members were common topics of discussion. In fact, the virtues and abilities of the members of the tribe, particularly of the males, were commented on almost constantly, from boyhood to old age. Of these discussions the younger members of the tribe were constantly aware; so the ideal of tribal virtues was ever before the minds of the young Indians. Further-

more, the simple democracy of the tribal government necessitated the recognition of official capacity, and promotion to these simple though important offices was usually determined by usefulness to the tribe.¹ So the ambitions of the younger members were greatly stimulated in a variety of directions, and the youth soon began to look forward to the particular ceremonies which would usher them into full tribal privileges and rights. Thus to the initiation ceremonies were attached the greatest of interest.

While there are a variety of ceremonies, dances particularly, among primitive races in which the ecstatic states are produced, the more important of them being so generally connected with initiation ceremonies, we shall here confine our examination largely to them. So general are these initiation rites that they may be termed almost universal, the object being to prepare the novitiate for the larger responsibilities of tribal activities, the solemn ceremonies being held at the momentous crisis when the boy enters the portal of manhood and the girl is budding into potential motherhood. These initiation rites are so wide-

¹Powell, in 7th Annual Report, Bureau American Ethnology, p. 35.

spread that they may be termed characteristic of primitive life.

Closely guarding the secrets of the initiation ceremonies and the knowledge therein imparted concerning the various mysteries, there is developed by the young men a curiosity which makes them only too willing to enter the ceremonies, even though it is well known among them that the ordeal means the undergoing of severe physical suffering and even mental anguish. But refusal to submit to the rites in most tribes means degradation by being handed over to the women and children, to associate with them, and even to wear woman's dress in some cases.

These initiation rites bind the participants together with fraternal bonds, and their importance in promoting tribal solidarity can scarcely be overemphasized. This fraternal sense of solidarity is at basis the essence of tribal control and existence,—the yielding of obedience to the elders taught in exercise functionizes later to the benefit of the community by promoting tribal interests.

Among the Algonquins each Indian is guarded by a *manitou*, which protects, advises, guides. This *manitou* is determined by the form which appears to him when he is passing through

the severe fasting ordeal. It may be a snake, a bird, a fish, or a beast, or some other animate or inanimate object. This *manitou* is represented on the Indian's person by some portion of the object, a bone, a feather, a skin, or a tuft of hair, and is the Indian's "medicine," to which he performs at times rituals, though the honorific features are directed towards the deific thing which the "medicine" symbolizes. The "medicine" is propitiated by tobacco offerings, thanked in prosperity and chided in adversity. A medicine unproductive of beneficent results is liable to expatriation and another substituted.¹ The youth of the Algonquin early begin the practice of seclusion with fasting, the earlier fastings being short, and with the chief idea being preparation. But during adolescence they become more serious and of the utmost importance in maturity, when the fast and vigil are had with the distinct purpose in view of seeing or hearing that which will reveal something of the mystery of life. In this mental attitude they go determined to see, hear, feel. It is then they see strange things, hear prophetic warnings and encouragements, and see or hear or sense an all-pervading presence,—gain

¹See Frazer's "Totemism and Exogamy," volume 3, pp. 373, 374; also Francis Parkman's "The Jesuits in North America."

hidden revelation. Some see, some hear, and what is heard comes with authority. It was represented to the Sioux and Kickapoo Indians that this was the source of the famous Ghost Dance,—that its step, ritual, song, and its teachings were revealed to the young woman who later told it all to her people.¹

Women as well as men fast, the fast being observed always at the advent of puberty.

The following quotation from a Fox Indian on an experience in the sweat lodge is of interest: "Often one will cut one's self over the arms and legs, slitting one's self only through the skin. It is done to open up many passages for the *manitou* to pass into the body. The *manitou* comes from the place of its abode in the stone. It becomes roused by the heat of the fire, and proceeds out of the stone when the water is sprinkled on it. It comes out in the steam, and in the steam it enters the body wherever it finds entrance. It moves up and down and all over inside the body, driving out everything that inflicts pain. Before the *manitou* returns to the stone it imparts some of its nature to the body. That is why one feels so well after having been in the

¹See William Jones's "The Algonquin Manitou," in *Junior American Folk Lore*, volume 18 (1905), p. 187.

sweat lodge.”—“Among the Oglala Dakotas,” 11th Annual Report, Bureau American Ethnology.

Separate ceremonies, religious and serious, are held celebrating the advent of girls and boys into puberty. The boys are inducted by one of two ceremonies, the “*wohduze*” ceremony or the “bear” dance. Each follows individual preparation of fasting and self-mortification, and dreams significant of his life must have been had. The private religious rites precede and follow the public ceremony. The public one ushers him into the responsibilities and dangers of the tribe life; and according to old customs the youth takes a wife only after he has proved his prowess.

The animal which appears to the man during his religious fasting determines the secret society he shall join. All are named after animals.¹

In the “*Dahpiké*” or “*Nahpiké*” ceremony of the Hidatsa Indians, the participants fast four days, dancing and singing in sight of the food, and mutilate themselves quite similarly to the Mandans, as described by Catlin.² Strips of skin are cut from the arm, from wrist to shoulder, or

¹Dorsey in 11th Annual Report, Bureau American Ethnology.

²Page 503, 11th Annual Report, Bureau American Ethnology, Art. Dorsey.

from the back. Skewers are thrust through the skin and torn out by attaching heavy dragging weights, etc. These horrible ordeals are passed by young men wishing to become braves or to rank as adult members of the tribe. One observer saw children of six or seven years subjected to these tortures.

Mr. George Catlin, who traveled quite extensively among some of the American tribes and with great patience made large numbers of oil paintings of persons, habitats, utensils, etc., asserts that all Indian tribes are religious, worshipful, many going to extreme lengths in denying and humbling themselves. He credits all tribes with believing in God (Great Good Spirit) and the Evil (or Bad) Spirit, in future life and compensations.¹ Catlin has been somewhat discredited as an ethnological observer, and it is a question of how much of his own belief he projected into his interpretation of the ceremonies and rituals he observed. But as an artist he proved to be a fairly accurate delineator of ceremonies and rituals, and has left us some pretty good descriptions of some really horrible ceremonies practiced, particularly those among the Mandans.

¹Smithsonian Report, 1885, part 2, p. 351.

The Mandan youths, to appease Good and Evil Spirits and to secure passage into future elysian fields, subject themselves to "horrid and sickening cruelties." To establish a reputation for bravery the young Mandan will enter a period of fasting to be terminated only by the extent of his endurance,—from four to seven days, during which time he seeks a solitary place on a hill or cliff, and cries constantly to Omahank-Numakshi and the higher powers for aid.¹ He does penance, makes sacrifices, even mutilates himself, beseeching the First Man or the Lord of Life to indicate his guardian spirit. When in this excited state he dreams of an animal or some other object, that he assumes as his guardian spirit.²

The young men on arriving at manhood are conducted through severe ordeals of privation and torture calculated to demonstrate which ones are endowed with the best enduring qualities demanded of energetic braves and indomitable leaders.

These terrible exercises are held when the willow leaves have fully expanded. On the second day about fifty young men entered Medi-

¹Dorsey, "A Study of Siouan Cults," p. 502, 11th Annual Report, Bureau American Ethnology.

²Dorsey, "A Study of Siouan Cults," 11th Annual Report, Bureau American Ethnology, p. 508.

cine-lodge with medicine bags in hands, and for four days under careful watch they were kept in the lodge without food or drink or sleep, preparatory to the terrible ordeals. Each day the Bull Dance is performed, four times on first, eight times on second, twelve times on third, sixteen on fourth. On fourth day the candidates pass through great tortures. They are hung up by skewers in skin of shoulders. Buffalo skulls and other weights are tied to legs, by skewers passed through the skin and gradually torn out by gravity or later by dragging. Fingers cut off, usually the little one. All the time the chiefs watched to see who was most stout-hearted. The candidate, to show his great fortitude, smiles when cut, and the test is to see who can hang longest by the flesh before he faints, and who is up soonest. With weights attached to skin they run races around the camp till they faint, and are then dragged around till skulls are detached by tearing out.

Captain Maynadier says that he noticed every male Mandan over ten years old had scars of skewers and cords on breasts or shoulders. The few who refused to undergo the torture were banished from men to the society of women and

children, to wear women's dress and do women's work.

Among the Nintun Indians of California a ceremony is performed at maturity of the girl (twelve to fourteen years) by her village friends. All the surrounding villages are invited to the dance. As a preparation the girl must abstain from all animal food for three days, confining her diet to a limited allowance of acorn porridge. During her fast she must remain alone in the woods, no one being permitted on pain of death to touch or even approach her. To break her fast she eats a sacred porridge called *Khlop*, made of roasted buckeyes. The eating of this porridge consecrates her to womanhood. The ceremonies may cover several days. At the conclusion of the ceremonies the chief takes her hand and ceremoniously dances with her before the assembled dancers.¹

Among the Shastika the puberty dance is held for the girl, she being compelled to fast for ten or twelve days, abstaining from animal meat, and shortening other rations.²

The Maider have a secret society among the

¹See Tribes of California, 1877, United States Geological Department publication, pp. 235, 236.

²Powers' Tribes of California, p. 250.

men called Kumeh, the "Order of Manhood," into which the boys are initiated at about twelve years of age. Not all of the tribe's boys are initiated, however. Herein a new name, his virile one, is given each boy, and for ten days following he must eat no flesh, only acorn porridge.¹

The first grass dance of the Nishinam Indians, given at the first rain of the rainy season, is entered into so enthusiastically by the men that they sometimes fall exhausted into a trance in which they lie for hours. Speaking generally of the California Indians, Powers says they have shown "capacity to endure prolonged and terrible self-imposed penances or ordeals," usually fasting, chiefly among the northern tribes. "In their liability to intense religious frenzy, or rather, perhaps, a mere nervous exaltation and exhaustion, resulting from their passionate devotion to the dance, they equal the African races. The same religious bent of mind reveals itself in the strange, crooning chants which they intone while gambling."²

On diligent inquiry Bourke learned from Apache medicine men whose confidence he had gained, that any young men of the tribe could be-

¹Pp. 305, 306, *Tribes of California*, Powers.

²*Ibid.*, p. 406.

come "doctors" (*diyi* in the Apache language, which is translated *Sabio* by the Mexican captives). It is necessary for the candidate to convince his associates that he has the "gift"; that is to say, a dreamer of dreams, able to fast long and interpret signs and omens, and to demonstrate a strong spirituality. He withdraws from society of his fellows, especially at night, in "high places" which "were interdicted to the Israelites."¹

The youth of the Creek Indians spends up to twelve months in solitude, fasting an increasing length of time each new moon, until near the close he must undergo a fast of nine days, in which he has the vision which supplies his medicine. Before the fast is over he must obtain the object of his medicine and place a portion of it in his medicine bag.²

Among the Tuscarora Indians the young men are put through a ceremony called *husquenawing*, to be taught obedience. The "house of correction" is a large and strong cabin, where in a darkened room the boys are kept starving for days, compelled to drink maddening concoctions and live on vile foods for five or six weeks, where

¹See Medicine Men of the Apache, 9th Annual Report Bureau Ethnology, pp. 452, 453.

²Frazer's Totemism and Exogamy, volume 3, p. 402.

they rave and howl dismally. Some do not survive the ordeal, and others are brought out lean and changed, and dumb for days.

The Hupa Indians of California have initiation ceremonies for the adolescent girl. As a preparation for the ceremony the maiden is compelled to fast for nine days, away from the tribe and the men in particular. The ceremony is terminated by a dance in which the chief takes the maiden by the hand and welcomes her as a woman of the tribe.¹ This tribe holds other dances in which men fast till almost skeletons in order to acquire power, through visions, dreams, etc.

Among the Keltas of California the Shamans believe themselves able to converse with spirits in their waking hours as well as in dreams. Visions in dreams is common among the California Indians.²

Fasting in certain ceremonies is common to Karok, Yurok, Tolowa.³

Among the Ojibwa Indians there are three classes of Shamans or mystery men,—the Mide,

¹See Powers' Tribes of California, in volume 3 of Contributions on North American Indians, p. 85, et seq.

²Ibid., Powers' Tribes of California, p. 91.

³Ibid.

the Jes-sak-kid, and the Wabeno.¹ The Wabeno or "men of the dawn," or "eastern men," have a profession little understood, according to Mooney, and their number is limited, and Schoolcraft says some writers hold them to be of modern origin.²

Mooney says the Wabeno act individually, and have no society. In his youth the Wabeno leaves his home and undergoes a fast lasting for a number of days, and in the dreams and visions had during this fast is he prompted as to his life's course. On occasions of successful issue of enterprises due to the assistance of the supernatural powers of the Wabeno, feasts and dances are given, of a boisterous character, where the Wabeno gives demonstrations of his prowess, by taking up red hot coals, bathing his hands in boiling water or syrup, without apparent discomfort, etc.

The Jessakkid is a seer and prophet, and the Indians think he can reveal hidden truths. They practice their arts singly, and have no association, hence no initiation. The gift which makes them capable of becoming Jessakkid is supposed

¹"The Midewiwin of the Ojibwa," by Hoffman, in 7th Annual Report Bureau Ethnology.

²"Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States." Phil. 1851, p. 369, volume 1.

to come from the god of thunder, Animiki. Few get the gift, received usually in youth when undergoing fasting and prayer, wherein visions and dreams appear. They are skilled in disengaging themselves from bindings, cords, etc.

The Mide is a true Shaman. They have a society, with elaborate initiation ceremonies. They are medicine men and exorcists.

An important event in the life of a youth of an Ojibwa is his first fast, when he leaves his home and seeks seclusion in the forest. There he fasts for days till in a hysterical or ecstatic state he experiences visions and hallucinations. The first object appearing in such vision is adopted by the youth as a personal mystery, guardian, or tutelary spirit, and is subsequently mentioned by him only after offering sacrifice.¹ The faster may become impressed to become Mide. If so he begins preparation.

Among the Ojibwa, after the birth of a male child it is customary to have a feast participated in by friends and family by invitation. A Mide (medicine man) is designated to serve as god-father, and to dedicate the child. The special pursuit to which he is designated is determined by

¹"The Midewiwin of the Ojibwa," by Hoffman, p. 163.

the visions of the Mide. If to the "Grand Medicine," then a special preceptor is by the parents procured to prepare the boy to enter the Mide society.¹ The initiation into the various degrees of the Midewiwin is accompanied by long and elaborate ceremonies, covering (at intervals) several years.

Among the Salishan Indians of British Columbia, when a girl reaches maturity she must go alone to the hills and undergo a long period of retirement. At its close, she records her experiences by drawing a number of rude figures in red paint on a boulder, indicating the rites she has performed and the visions she has had.² Such petroglyphs, religious in character, are to be found in every continent, and represent, according to Brinton, the "beginnings of the art of drawing."³

Two Crows and Joseph Le Flesch heard or were told that for unnumbered generations boys approaching manhood were told to go to sequestered places and fasting for days call upon Wankanda for aid. They usually believed that they received communication from divine sources. Fasting was always practiced when it was de-

¹Ibid., p. 278.

²Bulletin American Museum Natural History, volume 8, p. 222.

³Brinton's Religions of Primitive Peoples, p. 236.

sired to obtain superhuman power or assistance or to acquire a transfer of superhuman power. Hunting parties were required to fast four days at beginning of hunt, while the captains of war parties fasted as a preparation for the campaign.¹

Among the Omahas, the boy when about eight years old undergoes a fast of one day, spending the time on a cliff crying to Wakanda to have pity on him and make him great. At sixteen the fast is lengthened to two days, without fire or food or drink, while at about nineteen the ordeal is lengthened to four days. Many were convinced that Wakanda spoke to them.² This tribe also have dances of those who communicate with various animals and ghosts, etc.

The Zuni hold to the belief that each male child, to insure happiness and success must before completing his fourth year be breathed upon by supernatural beings. This is accomplished by an elaborate ceremony of dramatic personation every four years. It is noteworthy that the vows of the child are taken vicariously, to be renewed by the boy on attaining the age of discretion.

¹"Siouan Cults," by Dorsey, in 11th Annual Report, Bureau of Ethnology, p. 390.

²Omaha Sociology, by Dorsey, in 3d Annual Report, Bureau American Ethnology, 1881-82, p. 266.

Opportunity for this renewal is given by an annual ceremony.¹

Among the Chitimacha Indians there are priests or Shamans (termed differently in the language of the common people and that of the nobility) whose duties are connected with the supernatural. Each village has at least one Shaman and each Shaman has an apprentice who succeeds to the position of Shaman on the death of his master.

When the youth of the Chitimacha reaches manhood a ceremony is held in the temple, designed rather to inure to hunger and thirst than to impart certain mysteries of the worship of their main deity, the Noon-Day Sun. Adorned with ribbons, feathers, paint, and small gourds, dressed only in breech cloths, they continue fasting and without tasting water for six days, being led in dancing almost continuously by their *ephoroi*, or disciplinarians. But in order to secure a personal guardian spirit each boy and girl undergoes a solitary fast and confinement, when they are confined until they dream of the animal to be their helper.² This old religion lasted till the

¹See 5th Report, Bureau Ethnology, 1883-84, pp. LII and 548.

²"Indian Tribes of the Lower Mississippi," Bulletin 43, Bureau Ethnology, pp. 352, 353.

Indians became Catholic some half century or more ago.

The Natchez often fasted to insure certain results or guarantee certain accomplishments.¹

The Natchez Shaman or doctor does not separate medicine from magic; and in order to acquire the necessary powers he shuts himself in his cabin and for nine days, without food and with water only, undisturbed by others who are forbidden to disturb him, he makes a continuous noise with his rattle of gourd and shells and invokes the Spirit to speak and acknowledge him as doctor and magician. He cries, howls, contorts, and quakes, foams, and grows short of breath. But at the termination of his nine days of training he issues from his retreat triumphant, boasting of conversation with the Spirit and of the receipt of the gift of healing, and power over storms and weather.²

Voduisism.

This strange cult, extant to some degree among the negroes of Louisiana, and to a far greater extent in Hayti, has had such a powerful effect in

¹"Indians of the Lower Mississippi," in Bulletin 43, Bureau Ethnology, p. 177.

²Ibid., p. 178.

promoting solidarity among the negroes, particularly in Hayti, that it justifies a brief mention here.

The word *vodu* is from the Ewe language, of the slave coast of East Africa, and is general, not specific. "Vodu worship" means "god worship," and was probably introduced into Hayti from the Ewe country in the following manner: In 1727 Ardra and Whydah, of the Ewe country, were invaded by an inland race seeking a coast outlet. The prisoners were sold as slaves and many were carried to Hayti. In the Republic of Hayti there are about 50,000 whites, 60,000 mulattoes, and 800,000 negroes. Domingo Republic, in the eastern part of the island, adds another 200,000.

The *vodu* practices introduced into Hayti by the Ewe slaves spread rapidly, despite the strenuous efforts of the planters to suppress them. Probably some of the Ewe slaves found their way from Hayti into Louisiana. In fact in 1809 some French planters with their slaves sought refuge in Cuba, and later went to New Orleans.

So rapidly did the cult and practices spread and so tremendously did its secret power aid the Papaloi or *vodu* priests in defying the authorities, that in 1804 France abandoned her settlements in Hayti, and Spain did so in 1821. They tired

of contending against the power of the priests. Even educated negroes joined the orgies and swore to support the vodu system. The oaths taken are terrible and are made to the serpent god, who is implacable, and is represented by a python priest and a pythoness, called the Serpent Papa and Mamma. The python god is kept in a box and worshiped as a god, "the Vodu," being considered a superhuman and omnipotent being, guiding the events of the world with full knowledge of past and future events, his communications to his worshipers coming only through an arch priest and a negress raised to the rank of a high priestess. At the ceremonies sacrifices are offered and it is strongly believed that even human sacrifices, spoken of as "goats without horns," are offered to the serpent god, the lungs and heart being eaten raw and the blood drunk, thus adding virtue and vitality to the drinker.

The serpent is aroused only at night and with secret ceremonies. The priestess, standing on a box, at the command of the priest the snake is brought and the priestess, trembling, with contortions and convulsions, speaks as the oracle of divinity, prophesying, exhorting, amid the clanging of bells and the acclaim of the devotees.

Fresh oaths are administered, offerings sac-

rified (goat or human), each devotee partaking of the blood with horrible oaths of fealty to the cult. Then follow wild orgies, drinking, dancing till some swoon and are dragged off. General license follows and another date is set for renewals.

The Haytian Government supports this "religion," considering it a firm prop to the independence of the country.

Africa. The Vey tribes of Liberia have regular institutions of instruction for men to learn their commonwealth relation, initiation being a perquisite to office holding. Deep scarifications on the back are the symbol of initiation, accidental similar scarifications subjecting the bearer to severe punishment.

The Transvaal tribes hold circumcision lodge every four or five years, and public opinion forces the uninitiated to submit to the ceremonies, however rigorous or severe.

The Hottentot boys remain with their mothers till about the eighteenth year, when by an initiation ceremony, *Andersmachen*, they are installed with the men and converse with them exclusively, while before it was the reverse. After initiation the young men may even abuse their mothers

with impunity, to show their graduation from maternal tuition.

The Andaman Islanders observe fasting periods which begin before puberty and may continue up to five years. Many taboos are placed upon favorite articles of food, such as turtle, honey, pork, and fish. The fast is terminated by edict from the tribal chief. The fasting is a test of endurance and fitness to become a tribal member, and of ability and fitness to become the head and support of a family.

Fijians are compelled to attend two Nangas before they are considered fully initiated men. This means a probation of perhaps two years or more.

When war, pestilence, or other causes have prevented the holding of initiation ceremonies for a number of years among the Fijians, in the Nanga ceremonies may be seen bearded men, fathers, with young boys being ceremoniously made tribe members, the importance of the step making them willing to submit. These ceremonies are open only to native born tribesmen. The same has been observed in the Barlum ceremonies of the Finsch Haven natives of Kaiser Wilhelm Land.

In the initiation ceremonies of the Elema tribes

of the Papuan Gulf, illegitimate children are excluded.

In the *Ona* tribes of Tierra del Fuego the youth are taken through initiation ceremonies of considerable severity, and only to the initiated men are the tribal privileges extended. The uninitiated are barbarians and belong with the women and children. In extreme cases the uninitiated are banished or exterminated.

The men in this tribe have ceremonies designed to frighten the women into unquestioning obedience. During the long winter nights the youth are taught the inferiority of women and that only to intimate men friends and their fathers must their real minds be revealed. Brotherly ties, or man to man friendships, are closer than between opposite sex.

The period of probation in these tribes may cover two years or more.

Among the *Siamese* it is believed that the gods speak at times through the mouth of a woman who is thus favored of the gods. Careful preparations are made by her to receive the messages and reveal to her devotees the places where lost articles may be found, though she professes to have no subsequent memory of what transpires while she is in the opneustic trance.

Among the Basutos the initiation rites fall into three groups, with an interim of three years between each group.

Some of the Yoruba tribes require the youth to remain under control of elders till he has killed a man.

No small part of the life of an Australian is passed in magical ceremonies. Some of the ceremonies, the intichiuma ceremonies for instance, may be prolonged over several months. These have the appearance of being magical rites to promote success in securing a supply of food, and often, but not always, accompany the initiation ceremonies of the young men.

The medicine men of the Australians are called "Blackfellow doctors," and these have much to do with the magic, charms, etc., in which the natives so generally believe.

Among the native Australian tribes especially do the initiation ceremonies play a most important role in the tribal life, having sociological as well as biological purposiveness.

To the casual observer an Australian tribe seems to have no tangible or recognized form of government; but closer inspection reveals that there are well-understood tribal laws and customs, according to and within the limits of which

the individual must regulate his individual and social actions,—the relations of the sexes, connubial and general, the secret ceremonies, the selection of foods, etc. Violation of the regulations involves the infliction of punishment of varying degree of severity up to and including death; though in many instances obedience to such customs or laws is secured not by the fear of bodily infliction by authoritative act of tribal functionaries, but by dread of supernatural punishment, such fear being inculcated by teaching from earliest childhood. Behind this impersonal power or authority stand public opinion and a belief in the supernatural, though with the majority of Australian tribes a belief in spiritual interference with mundane affairs seems greatly outweighed or overshadowed by a belief in magic or the effect of charms.¹

But at times this impersonal power seems to exercise functions closely simulating something quite other than ethereal. If a man break one of the rigid marriage laws a council of headmen is more than likely to follow. Should after long deliberation he be determined guilty and a sentence of death passed upon him, not to this “im-

¹See Howitt's "Native Tribes of Southeastern Australia," pp. 295, 296.

personal power" alone is left the task of executing the sentence, but a party is organized whose object is to carry out the sentence, and the offender against the tribal regulations knows quite well that he has other than an "impersonal power" to deal with.¹

As with many or all primitive tribes, in many of the crimes committed retribution is left to the individuals affected more immediately by the offense. There are, however, crimes held to be against the tribe which are dealt with by tribal authorities. Among such crimes are murder by magic, violation of the exogamous laws, or betraying the secrecy of the initiation ceremony.²

Headmen exercise authority and this position is gained largely through age and experience, though to enjoy the greatest influence necessitates the union of age with reputation for having been or being a great fighter, medicine man, or orator. Where all these characteristics are found combined is found the greatest influence and authority granted by common consent, though a tendency is found in some tribes to determine the succession by primogeniture. The tribal council,

¹See Spencer and Gillen, "Native Tribes of Central Australia," p. 15.

²See Howitt's "Native Tribes of Southeastern Australia," p. 354.

composed of the old men of the tribe, automatic in its creation and sittings, is quite general and determines much of the tribal movements and actions. The younger the man the less he has to say. The uninitiated boys look forward for years to when they shall have qualified to sit in this council, a fact which goes far towards engendering and preserving an absorbing interest in tribal affairs on the part of the young. Council proceedings are rigorously kept secret. Ethnological students desiring to observe the council ceremonies have been permitted to do so only after they themselves have learned the native language and become so familiar with the initiation ceremonies that they have been accepted by the natives as fully initiated members of the tribe. Dire calamities are threatened against those who reveal its secrets.¹

It is quite generally believed by ethnologists who have observed the Australian tribes, that practically every native Australian under normal tribal conditions is subjected to initiation ceremonies before being admitted to full tribal privileges and secrets.

Rarely are the initiation ceremonies of a tribe

¹See Howitt's "Native Tribes of Southeastern Australia," pp. 297 to 322.

peculiar to it. The tribes usually intermarry with certain other tribes, and there is a free interchange of attendance upon and participation in these ceremonies. General types are therefore distinguished.¹ Howitt dividing the Australian tribes into two great classes, the eastern and western, describes those of the Coast Murring tribes as being typical of the eastern type, which with certain variations prevail. And of the general resemblance to the western he says: "The principles which underlie the ceremonies of the western type are in some points the same as those of the eastern type. The youths are separated from the control of their mothers and from the companionship of their sisters, are usually taboo as to women during their novitiate and are generally initiated by the men of the other moiety of the tribe. The inculcation of obedience to the elders and observance of the tribal morality is common to both, but they are sharply distinguished by the rites of circumcision and subincision, and the practice of bleeding at the Wilyaru and similar ceremonies."²

It is not here necessary to set out all the details of even the typical ones so well reported by

¹See Howitt's "Native Tribes of Southeastern Australia," p. 512.

²Ibid., p. 676.

Howitt; but of some of the features it may be well to speak as having a bearing upon our subject.

The time of holding the ceremonies, after determining whether there is a sufficient number of boys to be made men, is fixed by consultations between the elders of the clans affected, and the place is appointed. The invitations sent out, as the contingent from each clan arrives (the last may not arrive for several weeks) at the appointed place, special preliminary ceremonies are held. All assembled and the ground prepared by that part of the community taking the initiative, the elaborate ceremonies begin, ceremonies which last for days. Only in the preliminary ones are the women permitted to participate, it being fatal for a woman to even see what goes on, or to even look upon the bull-roarer, an instrument used in giving the signal calling the men to the exact spot and warning the women away. During the ceremonies each boy is accompanied by two guardians who devote all their time caring for the boy, teaching him the details of the ceremonies, instructing him in manly tribal duties and legends, laws and moralities, and revealing the secrets kept by the men of the tribe, the functions of dreams, magic, etc. The boy is in-

structed not in any way to show any surprise or fear in any part of the ceremonies, and to bear without murmur any pain inflicted upon him in the ceremonies, and to remember everything he sees and hears.

All the ceremonies connected with the initiation, crude and nonsensical as they appear, are calculated to bring about a striking change in the boy's life, to break him away suddenly and completely from his past life, and usher him into the life in which his connection with his mother is severed and he becomes attached to the men, and he is made sensible of his duties as a member of the tribe who must assume his share of the responsibilities of the community. And considering the social conditions and culture (or lack of it) of the Australian, these ceremonies are probably well calculated to most emphatically impress these facts upon the mind of the novitiate and make it a factor in his whole future life.

The actual ceremonies extend over several days and form a continuous succession of alternately ludicrous and serious performances, mollifying and terrifying incidents, friendly and painful treatments, from which the young heathen can scarcely escape being deeply and lastingly impressed with the seriousness of becoming a man.

The dance plays a conspicuous part of almost every phase of the ceremonies, the men frequently entering into them with such zeal as to produce a kind of ecstatic frenzy in which they fall down exhausted.

Not only do the boys pass through the ordeal of circumcision and (in some cases) subincision, but in most tribes one or more teeth are knocked out (an upper or lower incisor, or a pair), either by loosening in the socket by mallet and chisel till it drops out, or by snapping it off in some adroit but painful way. Night and day, with almost no chance for the boys to rest, (sometimes for three days without being permitted to sleep,) the ceremonies go on, all the time the Kaboo are instructing their charges.

The secret ceremonies over, a return to the camp is made; but the ordeal for the boys is not over. Dressed now in the full dress of the men of the tribe (quite scanty enough to satisfy a décolletant) their separation from their mothers and sisters is made quite complete and duly impressed by their being compelled, after they have been for a moment scrutinized by the old women who pretend not to recognize them, to leave the camp, and for some weeks, sometimes months, live by themselves in the bush, securing such food as they can,

carefully avoiding all communication with women, even their own mothers; must not even look at a woman. During this probation period in the bush the difficulty of rustling their own living is greatly increased by the restrictions on food permissible for them to eat, as may be indicated by the following prohibited foods: Emu, any animal which burrows in the ground (reminder of the footholes of the ceremonies); creatures having prominent teeth (kangaroo, e. g., reminder of tooth); any animal which climbs to the tree tops, any swimming bird (reminder of final washing ceremony); the spiny anteater, common opossum, lace lizard, snakes, eels, perch, etc. It will thus be seen that the probation period is virtually one of fasting, as these restrictions result in an artificial scarcity of food, though the fasting is made harder by the plenty in the midst of which they are likely to be.

When the youths have, according to certain tribal authorities, successfully passed their probation period in the bush, (sometimes six months, with the Wiradjuri twelve months,) they are permitted to return to the camp, where they take their places in the men's quarters. But even then it is several years before they are permitted to claim their promised wives.

In the Ngarigo Ceremonies during the time the novice is absent in the mountains (may be six months) he cannot touch cooked food with his hands. The old man who attends him must put it into his mouth.

Among the Ya-itma-thang the young man is made *Kurrong* at about fourteen or sixteen years of age by knocking out two front teeth, and is then taken from mother and woman influence; at eighteen to twenty, when beard is properly developed, he is made *Wahu*, or to the rank of a warrior.

After speaking of the two general types of the initiation ceremonies, one being divided into two classes, being on critical examination much the same, Howitt expresses the belief that a man once initiated by either of the *Kuringal*, the *Burbung*, or the *Bora* ceremonies would be accepted as an initiated man by either of the others if he could make himself known. On three occasions Howitt was so accepted among strange blacks after they were satisfied that he was one of the initiated.¹

Among the Urabunna tribe, of the western part of Australia, the *Karaweli-Wonkana* or circumcision ceremony (at nine or ten years of age)

¹Howitt, *ibid.*, p. 593.

is followed by a probation period in the bush for several months in which he is not permitted to be seen by the women. The next ceremony is the *Wilyaru*, in which the young man is literally bathed in blood let from the veins in the arms of older men, followed by a scarification of his back and neck. Then for some months he is again compelled to exclude himself from the camp, in the bush. Later (every two years) the *Wilyaru* is followed by the *Mindari* ceremony. This with the additional ceremony of the *Kulpi* rite or sub-incision, completes the ceremonies, extended over some years, which initiate the young man into the full tribal life of the adult male.

Among the *Narrinyeri*, the boys from ten years of age on are not permitted to cut or comb their hair until after the initiation ceremonies. When their beards have grown enough the youth is made a *Narumbe* or young man. Later they are seized and carried by the men from camp to the initiation grounds where their matted hair is combed, roughly torn out with the point of a spear, and their mustaches and beards are plucked out. Sleep is denied the newly made *Kainganis* for three days and they are also without food, while water is drunk only by sucking it through a reed. When they are permitted to sleep after three days

they do so with their heads resting on two crossed sticks, and for six months their only clothing is a slight breech cloth. Three times are their beards permitted to grow about two inches and then pulled out before the *Narumbe* condition is passed, in which they are forbidden food belonging to women, and twenty different kinds of game are tabooed, only the animals most difficult of capture being allowed for food.¹

The initiation ceremonies of the Central Tribes are described by Spencer and Gillen in their "Native Tribes of Central Australia." With these central tribes the ceremonies are more elaborate and spread over a longer period of years. The first usually occurs when the youth is from ten to twelve, the last and most impressive ones not being passed through till from the age of twenty-five to thirty. Among the Arunta and Ilpirra there are four: (1) Painting and throwing the boy up. (2) Circumcision or *Lartna*. (3) Subincision or *Ariltha*. (4) The Engwurra or fire ceremony. In the Central ceremonies the knocking out of the teeth is absent, though practiced in other but minor ceremonies.

The first ceremony, throwing up and painting, takes place when the youth is about ten or twelve

¹See Howitt, *ibid.*, pp. 673, 674.

years. After being tossed into the air by the men while the women dance, he is painted. He is told this is to make him grow, and that from now on he must not play with women and children, but live with the men, and go with them hunting game. He does and begins to look forward to the time when he shall be fully initiated into the mysteries and secrets of the tribe.

Several years may pass before the next two ceremonies, circumcision or *Lartna*, and subincision or *Ariltha*, are had. *Lartna* may take place at any time after the boy has reached puberty. The ceremony of *Lartna* lasts over several days, and is prepared for by the accumulation of large food supplies, etc., as many corroborees are held during the ceremonies.

The boy, unaware of the set proceedings, is suddenly seized and carried to the ceremonial grounds. A human hair girdle, known as *Urliara*, such as men wear, is wrapped around his waist. He is painted and told to implicitly obey instructions during the ceremony and that under no circumstances must he tell either woman or boy anything of what he sees or hears. For a time during the ceremony he is isolated with a few men for three days in the bush, on restricted diet and under enforced silence. This is to impress

upon him the break in his life and the superiority of the older men. On the fourth day he is brought back for further ceremony performances. Singing and ceremonial maneuvers continue almost constantly. On different days performances representing different animals are held, calculated to instruct the boy in the tribal secrets and beliefs regarding totems and the sacred things connected therewith, and everything he sees and hears is surrounded with an air of mystery. Late in the evening of the ninth day the climax of the ceremony is reached, the operation, after elaborate ceremonies had been taking place during the whole day. During the ceremonies a sacred instrument, the *Churinga*, akin to the bull roarer, plays an important part in the exercises.

For some time after *Lartna* the youth is taken away by a charge and kept under certain restrictions till the later ceremony, *Ariltha* or subincision, some five or six weeks later (p. 251), though it may be longer. This ceremony is considered of equal importance with *Lartna*. Women take part in the performances of the *Lartna*, but are completely excluded in *Ariltha* (p. 252). This latter ceremony is held at the camp of the youth who were in seclusion since the former operation. The operation of subincision or *Ariltha* is much se-

verer than the former, and is accompanied by mysterious performances accompanied by instructions into the tribal mysteries. After this public tassels are tied on the youths and they are told they are now admitted to the ranks of men and have no more operations to fear. While recovering from the wound certain food restrictions are rigidly enforced, to be released only ceremoniously. He is ceremoniously conducted to the camp, and the ceremonies complete he is regarded as a member of the tribe initiated and capable of participating in sacred ceremonies, but not considered a fully developed man till the Engwurra ceremonies have been passed.

Initiation ceremonies of simpler sort are held for girls (breast rubbing with fat, throwing up, vagina opening, subincision).

The *Engwurra*, or *Urumpilla*, is composed of a series of ceremonies having to do with totems, ending in fire ordeals. These end the initiation ceremonies, the initiate thereby becoming *Urliara*, or full member of the tribe. The object seems three-fold: (1) to teach obedience to the old men; (2) to teach hardihood and self-restraint; (3) to teach the secrets of the tribe connected with the *Churinga* and the connected totems. This ceremony

as witnessed by Spencer and Gillen lasted from the middle of September till the middle of January, each day having from one to six ceremonies in the twenty-four hours.

Diffusion of Initiation Ceremonies. It is interesting to note to what extent initiation ceremonies are practiced among primitive races. In Australia they can be said to be almost universal among the native races. In Tasmania they are probable, while in Melanesia they have been observed among all the widely scattered tribes. In Polynesia they probably existed previous to the advent of permanent chieftainships and powerful rulers. In South Africa they seem to be common among the native tribes, while in South America and Central America they are common among the aborigines. In North America they have been observed in some form or other among the following tribes: Tuscaroras, North Carolina; Creeks, Georgia; Powhattans, Virginia; California Indians; Dieguenos, Southern California; Navajo, Sia, Zuna, and Hopi, New Mexico and Arizona; Kwakuitl, British Columbia; likely among the Delawares, and Iroquois; Seminoles, Florida; Muskoki, Florida; Cherokees; Ojibway; Menomini; Algonquins and Bungees, Wisconsin;

Sioux; Omahas; Winnebagos; Dakotas; Osage; Blackfeet; Cheyennes, Arapahoes, Shoshoni, Wyoming; Kiowas; Pawnees, Wyoming; Utes, Utah; Mandans; Usage and Ponka, Kansas.

How much more widely extended these ceremonies are it would be interesting to know, but is not essential here.

Chapter 7

Anger.

Just how far anger should be encouraged to play a role as a formative factor in character development is a difficult question, the answer to which depends in a great measure upon the viewpoint from which anger is considered. Were we to confine our consideration to the momentary fits of sthenic outbursts where its manifestations and goal are confined to abnormal or intense physical reactions against trivial or petty annoyances, where one stamps, fumes, blusters, and storms till his anger has vented itself in these activities alone, the question is simplified and not difficult of disposition. But if by anger is meant the aroused fighting instinct against encroachments on rights or liberties; resentment against

injustice or the infliction of wrongs, defiance to what challenges our moral or physical strength, or enmity to evil, then our question assumes larger proportions and its solution becomes of vaster significance.

That anger has had biological purposiveness is scarcely to be gainsaid. Fear may pass over into anger and in the explosive outbursts of energy following, success in defense may result. I have seen fear in a cat so transformed by motherhood into anger that she put to flight by a sudden attack a large dog from which she would ordinarily fly in a panic of fear. The sthenic activity of anger may as the culmination of an aggressive movement determine its success. Perhaps every hunter, though following game for sport, has experienced the strange passing over of the passion into something closely akin to anger which intensifies the desire to circumvent the quarry in its attempts to escape and which makes killing a delight though there may subsequently be a reversion towards remorse or pity.

Perhaps few men of achievement have in the last analysis been free from anger as one factor contributing to success in one form or another,—anger at the success of a rival or the goadings of an antagonist; resentment at social and economic

handicaps; subdued fury at the refusal of his fellows to give him a chance or to recognize his talents as he sees them. A grimly muttered, "I'll show them," hissed between set teeth and punctuated by swings of the clenched fist, probably has been the first stage in many a successful career.

If anger has had biological purposiveness in animal life and primitive society and if the recapitulation theory holds true, then ontogenetically instinctive anger would early put in its appearance as a heritage from primitive ancestors. The bull ape, irritated beyond the danger point by a sequence of apish annoyances, suddenly flies into a towering fury, when his roar of defiance and rage is at once a signal for the females and young to flee to shelter, and a challenge to the other bulls to mortal combat; and only when he has killed or been killed does the burst of fury subside. Irascibility is a common manifestation among savages. Not less suddenly than the bull ape does the Malay run amok when hopeless brooding, gloom, or pain bring on heartsickness as they term it. Once having given way to his fury the amoker runs on striking, stabbing, killing, till the rage has vented itself or he has been captured by experienced catchers or is in turn killed. Savages, by

dancing and yelling frequently work themselves into a towering rage as a preparation for battle or taking the warpath. Anger taking the form of revenge plays an important role in savage life, and under its stimulus individuals and groups, nursing their anger for days, weeks, months, and even years, will perform almost incredible feats of endurance and fortitude in order to wreak vengeance on the object of their wrath.

Darwin claims to have observed instinctive anger in children on the eighth day. Perez reports having seen it in the second month; while it is generally conceded that before the sixth month it is common.

With children the expressions of anger take on the form of scratching, biting, striking, or kicking inanimate or animate things. Most adults may and do occasionally experience this instinctive explosive anger towards objects or persons. When we, exasperated beyond further endurance, lose control and act and speak with abandon, reckless of consequence to foe or friend, is when the bull ape roars his infuriated challenge or the Malay runs amok. The outburst may follow a stimulus in itself insignificant when there has been a storing up or summation,—the last irrita-

tion being but the train to the magazine which a spark sets off.

But these outbursts may have a therapeutic value. A properly directed vent may be the safety valve to the boiler. Some forms of insanity are analyzed as stored up anger which has passed into channels from which discharge is not normal. What, therefore, to do with an angry child is of prime importance, but scarcely in our realm to discuss here further than to say that at times a child has a right to be angry, and forced repression of righteous wrath may incline towards neurotic conditions. Anger properly directed, on the other hand, has great pedagogical value. Physical well-being and equanimity of temper are so closely related on the whole that abnormal irritability should be a warning to examine for underlying physical or physiological causes. Diet, sleep, nourishment, exercise are all factors for consideration in control of anger; for malnutrition, insufficient sleep, lack of proper exercise all increase susceptibility to irritability and weaken control.

But the avoidance of anger is quite different from its control. To carefully avoid what would create anger would be a negative development after all. Anger is at times legitimate. It is evil

only when it is explosive and capricious, uncontrollable. As a good it appears as a strong resentment against injustice and is an index of character. Such a force, under the control of education and directed along right lines, should be encouraged rather than repressed. It is the development of the fighting spirit which always has played and always will play so important a role in life's game. If the fight instinct is repressed and eliminated we get the coward; if overdeveloped, the bully; if controlled and directed, the virile man. A great but plastic power, in children anger can be turned in almost any direction. To bring anger under control of the intellect qualifies one to face trying situations without losing self-control. It is basal to aggressiveness. A regiment of charging soldiers differs from a raging mob in just this intellectual control of anger. Society is the individual writ large; and Heinze holds that nations as well as individuals must give way to blind fury, and he thinks a war where the people fight with enthusiasm is good for nations. To accept his theory makes easy of explanation why some big wars, awful in their carnage, have started over the most trivial of causes. The French Revolution has been cited as the best example of the outcrop of rage. Pfister, in a recent pamphlet on

War and Peace, holds war to be a reversion to first principles,—a trying out process, which lets out fear and tenses up a people. While it destroys many individuals and breaks down many of the survivors, yet it lets out a primal tendency of the evolutionary movement by which man has fought his way up.

A war resulting from outcrop of anger promoted or engendered by selfishness or egotism makes the nation like the individual bully; but an uprising against oppression, or in the defense of justice and liberty, or for an oppressed neighbor, tends toward national virility.

Christianity contains a justification for outburst of righteous wrath, *vide* Jesus in the temple; his arraignment of hypocrisy, etc.

The crux of the matter is the sublimation of anger. Controlled, directed, intellectualized, not to say spiritualized, it becomes a motivation of achievement. Literature, modern and ancient, abounds in the descriptions of feats of heroes impelled by consuming rage to incredible accomplishment. Sublimated, its energies are transferred into higher regions. Culture and refinement are the agents for redirecting, and may even increase the occasions for wholesome indignation. Anger shifted from the egoistic to altruistic cir-

cles becomes of community value, and once thus socialized it can play largely towards national betterment. And to arouse righteous public anger is the first work of the social reformer. The extreme of individualism causes us to remain complacent and satisfied in the midst of suffering, misery, and rank injustice, so long as our own comfort and well-being are unaffected. But with the inculcation of broader, higher ethics, comes anger aroused by the perception that others are suffering injustice, wrong; and public abuse once tolerated becomes vigorously, even violently opposed or resented. To engender such anger or resentment is to establish a safeguard to society and national preservation, while for an individual to fight for a principle or a standard erected outside of self is a potent enricher of character.

To be thoroughly, furiously angry in others' interests has a wholesome effect on the one so angered. To know that one will resent vigorously an insult or an encroachment on principle or against a standard is to increase the respect others will have for that one. The growing complexity of society and its activities involves necessarily increased opportunity for conflict of ideas, interests, and even activities, and causes for anger of the higher type are likely to ever continue to in-

crease, and to select well the object of one's enmity is not infrequently to determine one's life's activities.

Anger as an expression of egoism may be turned to good account. Anger at the success of a rival, if turned into energetic activity to achieve a superior excellence, becomes a tremendous push-up in one's life. Resentment at lack of opportunity for betterment, if not allowed to burn itself out in useless smoldering, may be just the impetus needed to overcome the handicaps present and achieve distinction despite the hindrances. Bitterness over social injustices, though responsibility therefor may not be focused, may let loose within one an amount of energy which will carry him into the front ranks of men who accomplish things for humanity. Resentment of individual injustices may fire the aspirations and determinations till the final result shall be achievement far beyond what might otherwise have been.

Sublimated, legitimatized, rationalized, therefore, anger becomes a factor in developing the higher powers of man. Deflected into wrong channels it may become a soul-consuming, destructive fire, as nursed anger may grow into the form of hate which motivates deliberate murder or other crime. Toned-down-anger, on the other

hand, may be the power that impels man to overcoming obstacles, the realization of ambitions, the acquirement of ideals,—may formulate a life's purpose, push one out into new fields of research, or drive on to great things. To be rightly mad may be to tap one's greatest reservoir of energy.

Chapter 8

The Cult of Dionysos.

The religion of Greece as represented by the cult of Apollo had become conventional; Zeus, in his Olympian home, was nodding on his throne while around him the splendor of his court had become dimmed. Art, religion, ethics were losing their grip on the lives of men. Lethargy marked religious activity, and Greece was threatened by an impending decline, such as overtook India.

But an unlooked-for event changed the whole of Greek life. A train of ecstatic women and reveling worshipers, following a beautiful mystery god, startled men from their inactivity in art, roused the sleeping Zeus, and burnished up the tarnished glory of Olympia. It was the coming of Dionysos, and in spite of the stress put by Greek

philosophy upon the wide separation of gods and men, and in spite of the unemotional and sober older Greek religion, the new, wild, and entrancing religion of the Thracian god was adopted, molded into the Greek life, and he finally affiliated with the Olympian religion as the son of Zeus and Semele.¹ The following description of the rite of the Dionysian cult as given by Rohde, is quoted by Pratt:

"The rite was performed on hilltops, in the darkness of night, by the uncertain light of torches. Music resounded, the crashing of brazen cymbals, the rolling thunder of a great drum, and the deep note of the flute 'enticing to madness,' whose soul was first awakened by the Phrygian Auletes. Excited by this wild music the band of worshipers danced with shrill cries. . . . In a whirling, raving, rushing circle the inspired throng danced over the hillside. . . . So they raged till their emotions were aroused to the utmost pitch, and in sacred madness they precipitated themselves upon the beast chosen for offering. . . . The participants in this sacred dance were thrown into a sort of madness, a tremendous overtension of the whole being; a kind of rapture seized them in which they seemed to themselves and to others

¹Harrison, *Religion of Ancient Greece*, p. 54.

‘mad, possessed.’ . . . This powerful intensification of feeling had a religious meaning, in that only through such overtension and expansion of his being did man feel able to come into touch and communion with beings of a higher order, with the god and his throng of spirits. . . . This ‘*ekstasis*’ was considered a sacred madness, in which the soul having fled from the body became united with the god, in a condition of ‘enthusiasm.’ Those seized with this were called *Eutheoi*; they lived in the god, were in the god. While still in the finite ego they felt and enjoyed the fullness of an infinite life.”—Psychology of Religion, pp. 61, 62.

Tragic art is described by Nietzsche as the “*Kunst der Schmerzensfreude*,” and to explain why a young and happy nation like the Greeks should discover tragedy, why the need for it (for the art of a people is determined by a need), he would find two psychical states on which the development of art may be said to depend, the Apollonian and the Dionysian, the pure and the direct states of art. The Apollonian (plastic or pictorial) dreams of beauty while the Dionysian (musical) revels in the ecstatic delight of existence. The devotees of the Apollonian are seers par excellence, and live in dreams and the land of visions.

Set off from this explanatory art is the Dionysian, appealing to the emotions rather than to the intellect, expresses rather than explains, is vague rather than lucid. It finds expression in music with or without the dance, though combined in the ancient choruses. It is the principle of ecstasy.

When from Thrace the Dionysian cult came with its wine, music, and ecstasy, it received a warm welcome and spread rapidly. Dionysian spirit everywhere antagonized the Apollonic ideals, challenging the Apollonian religion, morality, art, philosophy, and even existence; flying in the face of accepted custom. Shaken from its lethargy Apollonianism rose to the combat and in mighty effort endeavored to repel the invader. Apollo stood for law, Dionysos for liberty; Apollo for duty, the other for love; the one for custom, the other for change; Apollo for science, Dionysos for intuition; Apollo for art, Dionysos for inspiration: in a larger way Apollo stands for form, Dionysos for life; Apollo for matter, Dionysos for energy; Apollo for the human, Dionysos for the superhuman; Apollo for the formed, the definite, the restrained, the rational; Dionysos for the power that destroys the forms, leads the definite to the infinite, the unre-

strained, the tumultuous, the passionate; Apollo pure form, Dionysos pure energy.

But after somewhat prolonged conflict in which victory seemed to alternate, a mysterious union took place. At Delphi the priests of Dionysos, with their train of ceremony and festival, were admitted to the home of Apollo. This mysterious union resulted in the birth of Attic tragedy. The merger of the Apollonic dream-world with the Dionysian chorus is Greek tragedy.

Archilochus, the lyric writer, was the first in which the two instincts were blended. The popular song was introduced by him, in which the melody is important. Music symbolizes a realm which is beyond that of the visible. The Apollonic instinct in the lyric poet produces the visionary conception while the Dionysian gives it transcendentalism. The product then is the lyric text linked to music. Thus was the Greek tragedy evolved from the satyr choir. The satyr idealizes longing for return to free nature, and this fabled child of nature is in relation to the man of culture what Dionysianism is to civilization. And in beholding the satyr choir the Greek was led to see the unity, the oneness in state and society leading back to nature. And every good tragedy functionizes by impressing this upon us, that life,

which underlies all, is ever indestructible, powerful, joyous, in spite of its multifariousness. Impressed with this idea the Dionysians rejoiced, reveled, and in their ecstasy believed they had become satyrs. The tragic choir became an artful imitation of that phenomenon of nature.

Tragedy was at first choir, not drama, though the god Dionysos was present only in imagination; later being objectified, the task of the choir became to so stir the spectators dionysically as to make them see the god rather than his masked representative.

Into Greek tragedy was introduced by the philosophy of commonplace things of Euripides and the Socratic doctrine of knowledge-is-virtue, the degenerating influences which finally proved its undoing.

Towards Socrates, whose theory that knowledge is virtue not only resulted in the overthrow of the grand old Hellenistic culture but whose influence still holds sway, Nietzsche directed his scornful wrath as the destroyer of Greek tragedy, for which was substituted a dramatized epic. As a result of the Socratic philosophy of logic the old art was stifled, paradoxically or clearly expressed but cold thoughts displaced lofty apollonian conceptions, dionysian ecstasies were displaced by

affected fiery passions of the actor, and the choir became secondary. The Socratic man of theories, thirsty for knowledge and perception and ready to die for them if need be, tended towards the utilitarian and the idea that the highest good lies in existence; though science and knowledge when pushed far enough reach limitations where logic breaks down. There appears the tragic again. But this compensatory reentering of the tragic takes it out of the realm of the useful.

As modern culture is optimistic, or Socratic, it does not favor the rebirth of tragedy. But the philosophy of Kant and Schopenhauer setting anew the limits of human knowledge, according to Nietzsche, made possible the overthrow of the optimistic, superficial, Socratic culture and the ushering in of the tragic perception. This hope in Nietzsche was enhanced by the development of the Wagnerian tragedies promising a revival of the Dionysian art. Music is Dionysian art par excellence, plastic art Apollonic. The highest music is a symbol of the world's meaning. As tragedy was born of the struggle of the spirit of music for figurative and mythical expression, from lyric to attic, so from the depths of fable it may reissue to a regeneration of our tragedy,—the rebirth of tragedy.

Cultured without myth the modern is educated abstractedly. Unrestrained by home myths the artistic imagination wanders aimlessly,—the result of Socratism. As æsthetic phenomena alone, are the world and existence justified. The object of myth is to teach that even the apparently ugly and discordant is an artistic game of the Will in which in the eternal fullness of its joy it amuses itself. This characteristic of dionysian art, difficult to understand, becomes comprehensible through the wonderful significance of musical dissonance.

The German spirit has not forever lost its home myths. One day it will awake with morning freshness, kill the dragons, eradicate the malignant dwarfs, and even the spear of Woden cannot check its course.

Chapter 9

The Energy of Jesus.

Whatever may be one's answer to the question, Who was Jesus? there stands out in startling distinctness a noteworthy fact, viz, in the three years of his ministry so intense was his activity that he impressed his personality upon the world to a degree achieved by no other person. What was the

secret of his success? By what power did he perform a work so stupendous in so short a time? To those who believe him to have been the "Son of God," "divine incarnation," "the Word made flesh," with miraculous and divine powers at his command, enabled thereby to live extraneously, at least temporarily, to physical law, or possessed of such ever present divine knowledge that super-human laws and powers could be evoked at will to accomplish his purposes, the answer is easy and obvious. To those who accept Jesus simply as a *man*, possessed perhaps of extraordinary powers, a great teacher of men, and to those who, accepting Jesus as the Christ doing the will of God here on earth but having taken upon himself the habiliments of humanity for the full purpose of his mission, the question of how he passed beyond the usual borders of human limitations and forced his human powers to the accomplishment of such strenuous work is seen to contain in its answer factors including much of the human elements. And this holds out promise to his followers that the answer once found contains or may contain a key to unlock some of their own unused powers. And it is from this viewpoint that we approach this division of our subject, viz, that whether we look upon his career as a work commissioned of

God or as the activities impelled by unusual motivation or stimulation, in physical equipment he was human and to this extent subject to human limitations. How he made that human equipment produce its maximum of energy is therefore of interest and is quite germane to this treatise.

It is quite well known to all students of the life of Jesus that scholars have taken their perspective from widely separated viewpoints. One extreme view looks upon Jesus as quite wholly divine, superhuman; the other as an eccentric, a lunatic, an epileptic. Between these views lie many others. That Jesus to some extent lived in a region of consciousness beyond the ordinary is the contention of Baumann,¹ deduced from an examination of the history of Jesus' life as we have it presented, particularly in Mark's gospel.

As an initiation to his ministry Jesus demanded of John baptism. John seemed to recognize in Jesus the mightier one who was expected. Miraculous signs at the baptism, according to the record, attested this fact and announced the greatness of Jesus' mission. From the opened heavens descended a dove to rest upon the one whom the miraculous voice proclaimed to be the beloved Son of God. The incident of baptism itself

¹*Die Gemutsart Jesu*, Leipzig, 1908.

could not but have been felt by Jesus to be a momentous one for him, as it marked a sharp change in his life,—the termination of his term of preparation. A new era was opening before him, the period of manhood's work. It was his consecration, a supreme spiritual crisis, and the serious importance of the occasion to him could not but have been greatly enhanced by the incidents related.

It is therefore little wonder that, his being filled with the mighty sound of the divine voice, he felt impelled to seek seclusion where, tempted of the Devil, living with the animals, ministered to by angels, he spent forty foodless days and nights contemplating his mission and message. One can scarcely doubt that in the many hours of deep meditation in the forty days fast and vigil there were many moments in which Jesus entered the ecstatic state, when his vision enlarged to encompass his future work. And from these ecstatic moments sprung the nascent consciousness of his great powers. At least we are certain that John asserts that the beginning of Jesus' miracles was after he came out of the wilderness and at Cana at the marriage feast. (John 2: 11.) And what is termed Jesus' temptation in the wilderness may have been the ecstatic mental excitement

awakened by consciousness of his supernatural powers afterwards so startlingly shown in healings and miracles. Knowledge of great power is in itself a great temptation. Without doubt the most serious of his threefold temptation was when there passed before his heightened and ecstatic mental sight the vision of a universal monarchy. Nothing but a keen sense of extraordinary powers could have given rise to such a temptation. With every Jew he held hopes of a restoration of Jewish national prestige; but here arose a vision of an enlargement of the national dream. Can it be doubted that here in the wilderness, communing with nature, with mental powers alert and heightened by his long fast, there sprang from these ecstatic visions the germ which, lodged in his breast, became the motivating force underlying his subsequent activities and which grew till its unfoldment gave to the world the great Christian idea of the kingdom of God or kingdom of heaven, in which Jesus is looked upon as the prince potentate. Coming from his long sojourn in the wilderness he immediately raised the warning cry, "The time is fulfilled, and the kingdom of God is at hand; repent ye!" And forthwith he began his remarkable career, impelled by the great dominating idea of the immanence of the kingdom. It

would be but natural if he should have been impressed with the idea that his power was given him to establish his everlasting kingdom against every resistance, and his subsequent rejection by the people was not due so much to his failure to proclaim himself a king as to his failure to use the weapons of force and compulsion so generally recognized as kingly concomitants.

It can scarcely be doubted that he came from the wilderness changed. As we have seen, according to John he had previously done no miracles. That he moved in a region of consciousness beyond the ordinary and that this was apparent to observers is rather strikingly shown by Mark's statement that after his return from the wilderness when he had healed some sick and cast out evil spirits his friends and the family sought him out and would lay hold of him, for he seemed "beside himself" (Mark 3: 21), while his opponents charged him with effecting his cures by the power of Beelzebub with whom he was in league. (Mark 3: 22.) His heightened activity and conscious display of power came as a surprise to his family; and yet, according to the records of Matthew and Luke, his family had on several occasions had demonstration that even as a youth some great central idea was stirring his soul. A not-

able instance was when his parents found him at the age of twelve years disputing with the doctors in the temple. Rebuked by his parents for causing them alarm and anxiety by his absence, his unexpected retort was, "Know ye not that I must be about my Father's business?" (Luke 2:48.) This, with other strange sayings, though she understood them not, Mary "kept in her heart" (Luke 2:51), probably recalled later, when in the midst of his healings and wonder workings his followers told Jesus that his mother and brothers awaited without to see him, he replied by asking, "Who is my mother and who are my brothers?" and added, "They who do my will." In his exalted state, to him earthly ties gave way before the fraternal bonds of the greater kingdom.

It cannot but be acknowledged that great power rested in the act of Jesus calling his disciples. A call coming from one energizing only in the usual levels of consciousness could hardly have instantly called fishermen from their nets, laborers from their vocations to follow at the beck of the leader. Jesus' call to cast their lots with him and follow where he led was accompanied by a power quickly discerned by those to whom the call was made. The same power of authority was felt or observed by those who heard him teaching in the syna-

gogues, for they, astonished, said he taught not as the scribes but as one having authority and power. He exorcised unclean demons, cast out devils whom he would not permit to speak, for they knew him. His fame spreading rapidly, all manner of diseased persons came or were brought to him and were healed by his command. Not alone did the neurotic disorders yield to his command, but even fever patients and lepers were cured at his word.

Then, early in the morning he sought solitude to pray; a custom he followed frequently. It was necessary to maintain his spiritual power. It is scarcely to be doubted that in these frequent soul communions with the Father he experienced the deepest ecstasy of this form of religious worship, though two instances in the record stand out in marked prominence, viz, the Transfiguration, and in Gethsemane. On the Mount of Transfiguration, where Jesus went for prayer, his exaltation was so great that he appeared transfigured before them. The phenomenon confused his three disciples till Peter talked without knowing what he said. They did not understand their vision though it pointed to his fateful end. The three who were with Jesus on the Mount of Transfiguration were also with Jesus later in the Garden

of Gethsemane where Jesus had gone to pray just previous to betrayal, which Jesus expected. Here, according to the record, so exquisite was the ecstasy of his agonizing that the blood extravasated and dropped as sweat. It was his preparation for the final ordeal, and here as in other strenuous ordeals his preparation was in the ecstasy of prayer.

It was the possessed who first recognized the Messiah, not with joy, but with grave apprehension, calling out for him to leave them alone. This recognition by the demons afforded foundation for the charge by Jesus' opponents that he performed his cures by the power of Beelzebub, with whom he must be in league. But Jesus rebuked them by saying that the power of Satan would not be used to defeat Satanic purposes, and that the accusation that demons were dispossessed at his command because in league with Satan was a slander against the Holy Ghost of eternally unforgivable proportions, thus emphatically expressing his conviction that he as a prince of the Kingdom of Light was marshaling his forces against those of the Kingdom of Darkness.

Jesus, as before mentioned, frequently withdrew for prayer; but it is not at all unlikely that these periods of withdrawal served a double pur-

pose; they afforded opportunity for physical recuperation as well as spiritual meditation. These observed periods of rest suggest either that he may have been easily fatigable or that he energized so closely to his maximum that his reserve of physical energy was kept low. His unexpectedly quick death on the cross indicates his easy exhaustibility or the smallness of reserve force. The strenuosity of his activity would indicate the latter.

Jesus attracted attention and acquired fame by his many healings; but the indifference with which he broke the Sabbath to do good attracted still greater attention to him, and great concourses of people surrounded him, and he did miracles in healing many of their sick.

He chose his twelve disciples; and the exalted condition of his mind is indicated by the instructions he issued to them as he sent them out to preach the gospel of the kingdom. Not only were they to preach, but were to heal and exercise power over unclean spirits. Of the morrow they were to take no thought; were not even to take a second coat, or purse, but go and preach, casting aside the cares of this world which had no place in his kingdom.

Asleep on the ship with his disciples when the

windstorm arose and was about to overwhelm the boat, they awakened him and he rebuked them for their lack of faith and then rebuked the storm into silence. His followers were awed at this manifestation of power over the forces of nature.

As they came to the shore a lunatic who had been dwelling in the tombs rushed to Jesus, acknowledging him as the Son of God. The legion of demons possessing the body of the lunatic, at Jesus' command left the man and entered the near-by herd of swine, which rushed into the sea and were drowned. Commotion followed and Jesus and his followers left.

On the way to the bedside of Jairus's little daughter a woman was healed of bloody issue by touching his garment. He perceived that force passed from him to the one touching his garment. If all his cures were thus accompanied by an emanation of force from his being, his many periods of recuperation are understood.

When they reached Jarius's house the girl was apparently dead. The unbelieving ones banished from the room, his three favorite followers with him, Jesus, taking her by the hand, raised her from the dead and then cautioned secrecy.

His journeying took him to his native city; but there he found little faith and healed few. After

the death of John, Jesus performed the first miracle of feeding the five thousand. Then Jesus sent his disciples away in the boat and went into a mountain to pray. In the morning the disciples on the boat in distress were astonished by seeing Jesus come, walking on the water. Then followed more healings, till his fame as a healer and miracle worker became very great.

Over near Tyre Jesus healed the neurotic daughter of the Syrophœnician woman, though at first he would keep his ministrations for the children of the kingdom, then yielded to the mother's arguments and healed the child at a distance, requiring an augmentation of faith. Leaving Tyre and Sidon he went to Decapolis, where the deaf mute was healed. For three days the multitude followed Jesus without food, and some four thousand were fed on a few loaves and fishes. Coming into another part of the country he healed the blind man of Bethsaida. Starting into the towns of Cæsarea Philippi, as they journeyed Jesus propounded the question, "Whom do men say that I am?" When he had been told what various ones had said, he asked, "But whom say ye that I am?" Peter then confessed him to be the Messiah, and Jesus charged them to tell no man.

The setting of Mark's story had been towards

this denouement, and Jesus seemed to accept the occasion as ripe for the presentation of his definition of his messiahship as prophetically portrayed in Isaiah and Daniel, and he spoke plainly of his probable rejection, suffering, death, and resurrection. Peter's rebuke and presentation of the popular idea is treated by Jesus as a Satanic temptation.

But his knowledge of the suffering through which he would have to pass seemed not to depress him; but, resigned to God's will, and with the belief that his death would open the way to glory, he journeyed on to Jerusalem and his fate. Along with his soul suffering went great hope.

It was shortly after this that with the trio he went up into the Mount of Transfiguration, coming down from which after healing the epileptic boy he went incognito into Galilee, and on the way taught of his messiahship; but the disciples, taking it literally, fell to contending about positions of honor in the coming kingdom.

In the instructions of Jesus to the rich youth who had kept all the commandments, Jesus demonstrated his great sense of human suffering and his idea that wealth is a trust. From this view to relieve the sufferings of poverty was a duty and piety as well as a virtue. In the kingdom of

heaven all were to become as little children and earthly possessions were of trivial account when compared with the greater spiritual things. In this spirit the disciples renounced their callings, doubtless to an extent at least also actuated by the belief that the nearness of the establishment of the kingdom made earthly possessions of little consequence.

Jerusalem was the goal of his journey. Two of the disciples were sent for the foal of an ass, the beast on which Jewish royalty had been wont to ride. His entry into and proclamation to Jerusalem thus seated was to be in accord with popular Jewish belief. He entered, saw the splendor of the temple, and retired.

The incident of cursing the fig tree occurred the next day, held to be symbolic. Indeed, by some it is held and perhaps not without reason, that all the miracles performed by Jesus were symbolic. The turning of wine into water at the marriage in Cana, the great draft of fishes, the raising of the daughter of Jairus, and Lazarus, the stilling of the tempest, the feeding of the multitude, walking over the sea, the coin in the fish's mouth, cleansing of the lepers, withering of the fig tree, etc., all have symbolic significance. In the triple temptation in the wilderness during

the forty days fast Jesus refused to exercise his powers for selfish ends or for purely temporary purposes; and it might well be held that to the heightened, exalted, spiritual vision of Jesus there was in each of his miraculous accomplishments meanings far deeper and broader than the ostensible ones.

The lofty spirit of enthusiasm which characterized Jesus and which continued among the Christians afterwards, is perhaps nowhere seen to better advantage than during the closing scenes of his life. That there was great nerve tension cannot be doubted. From Old Testament prophecies and the signs of the times Jesus knew his fatal hour drew near, a time when all his strength of soul would be tried to the extreme, when the faith of his followers would be put to severe test. Throughout the paschal meal with the prediction of betrayal, through Gethsemane, the trial, the march to Calvary, Jesus bore himself in a manner to indicate that dread arising from knowledge of the immanence of suffering, and his propitiatory death was held in abeyance by his superb belief in the exaltation which would come as a result of his suffering. Keenly agonized at the prospective ordeal, fearing the weakness of the flesh, he begged for the cup to pass if possible; yet im-

pressed with the importance of his sacrifice he resignedly exclaimed, "Thy will, not mine be done."

He was physically weakened. Unable to bear his cross he fell and had to be helped. On the cross itself he expired sooner than is usually the case.

From the foregoing brief review of Jesus' life history it is quite clear that he lived and energized in a level of consciousness above the ordinary. In all his ministry there stood out the great central idea of his messiahship. In his youthful mind was firmly fixed the belief that he had a special mission, for at the age of twelve we find him concerned about doing the business of his Father. At his baptism the visible appearance of the Spirit of God in the form of a dove and the audible acknowledgment of his divine parentage vivified and enlarged his previous impressions, while his whole life's purpose and work as he believed them to be were given direction and great subjective intensification by his fast in the wilderness, with its ecstasies of prayer and meditation. On issuing from the wilderness he at once raised the warning cry of the kingdom of God at hand, and began a labor which in intensity of activity is unparalleled. His continuous labor of teaching, preach-

ing, healing, and doing wonderful things was interrupted only by his short periods of retirement, when he would seek seclusion for prayer, meditation, and recuperation.

It can hardly cause wonderment that at the terminating crisis of his life the strenuosity thereof should have exhausted his physical powers, for his energies had been consumed by his wonderful energizing. Dominated, actuated, impelled constantly onward by the great idea of his messiahship and the importance of his mission to others, ecstatically conscious of his great powers, burdened always with keen sympathy for the suffering of others and his great desire to help mankind, he worked and labored in a way which has given us an unsurpassed example of what tremendous possibilities of spiritual activities lie within the reach of those who will to do; and of how greatly a great dominating idea can functionize as a key to unlock the hidden reservoirs of power and energy, and how hope can exalt above suffering when that suffering is for a lofty purpose,—a dominant characteristic of real Christians in all ages.

Chapter 10

Fatigue.

A lengthy treatise of the phenomenon of fatigue would be quite out of place here. It is, however, closely related to the phenomenon of second breath, and hence comes in for some attention in this paper.

It is almost axiomatic that the organs of the body cannot all run at top speed at once. It is a question of blood supply, and one of amount as well as quality of blood. By successive contraction a muscle is shortened, and if the regular contractions are continued long enough a point will be reached when further stimulation fails to elicit further contraction. When such muscle is fatigued by voluntary effort, according to Pyle¹ there are nerve cells in brain and cord involved, as well as muscle fibre, and where the fatigue is pushed to where voluntary effort is futile to lift weight, artificial stimulation will cause the muscle to contract, indicating that the nerve cells give out first. Doctor W. A. White, however, states that the nerves and central nervous organs are not susceptible of fatigue.² Fatigue is probably

¹Pyle's Personal Hygiene.

²Article in *American Journal of Medical Science*, CXLV (1913), p. 219.

due to at least three causes: (1) The using up of the contractile material or the substances furnishing the available supply of potential energy. Restitution of matter and energy falls behind waste. It is a draw on capital. (2) The accumulation of the waste products of activity, of which lactic (cacro-lactic) acid is an important one, and the transference of such waste products to the injury of the activities of other organs. (3) The lack of oxygen.

Repose is the complement of fatigue, and in rest all the waste materials are removed; new supplies of energy-producing materials are stored up.

The literature on fatigue is quite extensive; but one of the best contributions bearing on our aspect of the subject has come from the pen of Doctor Cannon,¹ in which he presents a summary of recent investigations carried on in the Harvard physiological laboratories on the effects of emotions on the secretions of the internal organs. We herein present some of the facts set out in his interesting and valuable contribution.

Scientific knowledge of the emotional states is meager, though many of the superficial manifestations of emotions have been noted, such as

¹Bodily Changes in Pain, Hunger, Fear, and Rage.

pallor, "cold sweat," dry mouth, expanded pupils, rising of the hair, rapid heartbeat, twitching of the muscles, which might arise from fear, horror, deep disgust. But of the effect of the emotions on the deeper lying organs of the body little is known, and the changes, if they are to be measured and noted, must be observed by peculiar or special methods.

Digestion depends upon a psychic factor to start it,—pleasure,—aroused by the sight and smell of food, its taste, etc., the pleasure starting the flow of the gastric fluids. The secretion of those gastric juices is checked almost instantly by pain and great emotional excitement. Pawlow with his laboratory dogs and sham feeding has shown that the presence of food in the stomach is not essential for the flow of the gastric juices. They flow only when appetite is present and the food material presented is agreeable. The mere smell or sight of food would start the flow. This seemed to justify the conclusion that the stomach juices are psychic secretions. This initial psychic flow of the gastric secretions is important because (1) its continuance depends upon the action of its acid or its digestive products on the pyloric end of the stomach, and the secretions of the pancreatic juice and bile are called out by

the action of this same acid on the mucous membrane of the duodenum. The satisfaction of the palate therefore determines the proper starting of digestion.

The feelings which are unfavorable to digestion, and which are stronger than those which promote it, are vexation, worry, anxiety, or great emotions, such as anger, fear, horror, or even overpowering joy. The movements of not only the stomach but of the entire alimentary tract may be stopped during great excitement, and peristalsis may be entirely checked by even mild emotional disturbances. Mental discord may thus bring about conditions of gastric inertia. The majority of gastric indigestion cases are functional and of nervous origin.

The bodily changes due to emotional causes are stimulated through the autonomic nervous system, separated into three divisions, the cranial, the thoracico-lumbar (or sympathetic), and the sacral. The line of demarcation between the three divisions is not complete, as the neurones of the mid-division are found reaching organs also supplied with neurones from the end divisions; and it has been observed that when the neurones of the end divisions meet in any organ those of the mid-division the influences exerted are an-

tagonistic, and the antagonistic divisions, it seems evident, may be reciprocally innervated by arrangements in the central nervous system. The cranial autonomic, for example, concerns itself with building up reserves for stress periods, its functions being accompanied by the mild pleasures of sight, taste, and smell of food, which are instantly banished by emotions stimulating the mid-division or sympathetic. But the natural antagonism between the two processes of saving and expenditure, preparation and use, is biologically purposive, as can be shown. The same kind of antagonism exists between the mid-division and the sacral, with the same concomitant antipathy between the resultant emotional states.

It is a well-established fact that artificial stimulation of the nerves to the adrenal glands will bring about secretory activity and that as a result adrenin in the blood will be increased. And this makes the assertion safe that mechanism exists in the body by means of which quick action of these glands is secured in putting adrenin into the circulation.

For many years it has been recognized that adrenin injected into the blood produces remarkable results, e. g., the liberation of sugar from the liver, relaxation of the smooth muscle of the

bronchioles, acts as an antidote for muscular fatigue, alteration of blood distribution, forcing it from abdominal viscera into heart, lungs, limbs, and central nervous system. Hence knowledge of the effects of emotional stimulation of this gland becomes of great importance. And from carefully observed experiments it is quite certain that stimulation of the splanchnic nerves results in an increase of adrenin secretion and consequently of the amount in circulation of the blood; and it is equally certain that impulses from the sympathetic system dominate the viscera, and that the adrenals are by strong emotions stimulated into activity by such nerve impulses as themselves produce profound changes in the viscera. The adrenin thus given off augments the nervous influences which induced the changes.

Among other effects of adrenin upon the body, other than inhibiting alimentary activities, an important one is the constriction of the blood vessels in portions of the body, with a resultant rise in arterial blood pressure. Another effect is the liberation of sugar. Injection of adrenin may liberate sugar to such an extent that glycosuria follows. Carbohydrate material is transported in organisms in the form of sugar, while the storage form is glycogen or animal starch. The normal

amount of sugar in the blood is 0.06 to 0.1 per cent, and any amount above that passes the sugar barriers in the kidneys; and that emotional stimulation may result in the liberation of sugar is attested by the fact that cats strongly excited develop glycosuria while Smillie found that four of nine students after difficult examinations had glycosuria though normally without it. Only one out of nine had glycosuria after an easy examination. Fiske and Cannon examined twenty-five football men after a hard and exciting game and found glycosuria in twelve cases, though five of the positive cases were substitutes not entering the game. The only excited "fan" examined showed glycosuria.

Without doubt the adrenals play an important contributory role in glycosuria from splanchnic stimulation. Sugar is the optimum source of muscular energy, and its liberation at times of great muscular exertion is a biologically significant provision of nature. Removal of adrenals debilitates muscular power, while injection of extracts of the glands invigorates.

By experimentation it was learned that improvement in the contraction of a fatigued muscle followed splanchnic stimulation. Splanchnic stimulation has two general effects, viz, increase

of arterial blood pressure and to cause the adrenal gland to discharge adrenin. In excitement as well as in strong exertion the blood from the large vessels of the abdomen is forced to other parts of the body. Increased blood pressure has been found to be directly effective in restoring the normal irritability to fatigued structures. Fatigue products or metabolites accumulate in a muscle doing work and interfere with contraction. A rise of blood pressure seems efficacious in removing such products.

Sympathetic discharges, aided by simultaneous adrenal secretions aroused by pain and excitement, force the blood from the vegetative organs of the interior to the exterior skeletal muscles, except that it is well known that the arteries of the heart are dilated rather than contracted by adrenin, while the vessels of the brain and lungs are only slightly if at all affected by adrenin. Thus excitement results in lungs, brain, and heart being abundantly supplied with blood taken from organs of less use in critical occasions, as the blood supply of the heart, lungs, and brain depends upon the height of general arterial blood pressure. Some of the factors entering into the shortened contractions of fatigued muscle are: (1) decreased supply of energy producing ma-

terial; (2) metabolites accumulate in muscle; (3) nerve polarization at point of electrical stimulation; and (4) lessened irritability. The threshold stimulus is heightened by fatigue and becomes a measure of its irritability, and observations show that the normal threshold may be raised by fatigue from one hundred to two hundred per cent on an average, and in some cases six hundred per cent or more, varying with time and the animals experimented on. Rest restores the normality in from fifteen minutes to two hours, the variation being due to time given for rest, the duration of the work, and the condition of the animal. Furthermore, it was observed that injection of adrenin (0.1 to 0.5 cubic centimeters 1: 100,000) decreased the fatigue threshold within five minutes to a 75 per cent recovery in nerve muscle and 46 per cent in muscle. And it was found, interestingly enough, that adrenin injection had no effect on the threshold of the nerve muscle and muscle in the nonfatigued animals. Thus adrenin functionizes in effecting a rapid recovery of normal irritability, and this by specific action and not wholly due to the effect of adrenin in general circulation. So adrenin acts as a restorer of muscle irritability, and will in five minutes accomplish what rest will only do in one hour or more. And

adrenal secretions stimulated by emotional excitement has like result.

Intravenous injection of even minute amounts of adrenin hastens the clotting of blood, and the increased secretion of adrenals due to excitement, pain, etc., (emotion) has some effect.

Thus adrenin discharged into the blood as a result of emotional excitement accomplishes the following results: It seems to be an essential in calling out carbohydrates stored in the liver, thus supplying the blood abundantly with sugar; it assists in taking blood from abdominal organs and sending it to heart, lungs, central nervous system, and limbs; it quickly and greatly reduces the effects of fatigue; it hastens coagulation.

The bodily reactions in pain and emotions are reflex, thus not will-controlled. The motor pattern is therefore deeply inwrought. But these automatic responses to emotion are, we are safe in assuming, useful ones. In what does their utility consist? The promptness of the results is noteworthy. Adrenal secretion resulting from splanchnic stimulation is a matter of seconds, while sugar liberation in the blood as a result is a matter of only a few minutes. Experimental results show that muscle work is preferably accomplished by utilization of sugar energy; and

that increase of blood sugar augments the ability of muscles to continue work. Hence increase of blood sugar due to major emotion and pain is of benefit to the organism in meeting emergency demands for great power output.

Adrenin freely liberated in the blood aids not only in calling out stored sugar supplies, but quickly restores fatigued muscles to original irritability.

The adrenals are not capable of prolonged action, being soon fatigued, but blood-sugar increase due to splanchnic stimulation may long outlast the stimulation period.

The smooth muscles of the bronchioles are normally held in a state of tonic contraction. This tonic contraction, increased from any cause, produces difficulty of breathing. Increased demand for air to the lungs, as in great physical exertion, may temporarily cause the normal contraction of the smooth muscles of the bronchioles to keep the bronchial orifices too small for the increased supply of air needed. Gasping for breath results, as in a winded runner. It is a partial asphyxia. But experimental results show that asphyxia stimulates increased adrenal secretions, and adrenin is known to have a relaxative effect upon the smooth muscles of the bronchioles, resulting in freer ac-

cess of air to the lungs. Hence in cases of vigorous exertions asphyxia may augment emotions in stimulating adrenal secretion with consequent increase of sugar output.

Thus the phenomenon of second wind may be explained on this chemical basis,—viz, the release of sugar and adrenin with consequent increase of blood flow, supplying energy and lessening fatigue, while the action on the bronchioles permits larger oxygen supply to the lungs. Physical “second wind” may therefore be looked upon as closely allied to the bodily changes due to excitement, etc.; and all these bodily changes, with accompanying qualification of the organism for greatly increased temporary output of power, are highly purposive from a biological viewpoint.

It has long been recognized that the major emotions have an energizing effect, and this has led some psychologists to speak of reservoirs of power which are tapped occasionally and by some few. And it is quite likely that there is an augmentation of nervous activity resulting in increased power which cannot altogether be accounted for as being due to the effects of the invigorating influence of the secretions above referred to. Strong emotions have dynamogenic value, as is indicated by the fact that on occasions

when the neuro-muscular system is likely to be put under unusual strain emotional excitement is not an unusual concomitant. This is demonstrated in competitive feats of strength or endurance in sports, prolonged religious dances, etc. And it is noteworthy that it is where there are excesses of emotional turbulence that remarkable endurance and prolonged exertion are seen to a degree to challenge astonishment. The presence of witnesses and music may be a contributing influence to the arousal of the emotional stress necessarily accompanying the efforts. And these emotional states frequently are accompanied by a feeling of power.

It will be seen from the foregoing that fatigue bears a close relation to physical erethism or "second breath"; and while it may not fully explain the calling into play of unusual reserves of power nor the tapping of reservoirs of energy apparently available at time of great emotional stress, yet it goes far in pointing out where the probable limits of these reserves lie. It may be quite probable that there are nervous reservoirs of energy called into play in these stress periods which augment those furnished by the secretions of the adrenals; yet further investigations may reveal that others of the internal organs of a class

with the suprarenals functionize in a way not now known to augment the wonderful results of adrenal stimulation, and such investigations may further clarify the mystery which surrounds the presumptive existence of the reservoirs of energy so little used by the average individual.

The phenomenon of mental erethism or "second breath" has received perhaps too little investigation. The difficulty of this problem has been so succinctly set out by F. M. Urban in his discussion¹ of Professor Dodge's discussion² of mental work that it appears well to quote Mr. Urban's words:

"Any information as to energy transformations which take place as concomitants of mental processes certainly would be an extremely valuable addition to our knowledge; but no such information is at present available nor is it likely to be forthcoming soon, for calorimetric experimentation in psychology will be at least as difficult as plethysmographic or sphymographic analysis. One may venture to believe that the difficulties will be even greater, because to the difficulties of isolating the mental processes will be added the difficulties of apportioning the proper

¹*American Journal Psychology*, April, 1913, p. 271.

²*Psychological Review*, vol. 20, p. 1.

amounts of energy to the different physiological processes going on at the same time. That this is not an imaginary but a real difficulty is proved by the recent discussions between Lehmann, Exner, and Hellpach, on the notion of metabolism (as measured by the amount of carbonic acid secreted) during mental work. Dodge's hope that thermo-dynamic analysis may one day help us toward a better understanding of processes not accessible to introspection refers to an ideal state of knowledge, and has nothing to do with the present state of affairs. Similar hopes were expressed in regard to plethysmographic experiments; but the prophets have been singularly reticent of late.

"Let us suppose, however, that all the experimental difficulties have been overcome successfully, and that we know the energy transformations corresponding to every mental process. Does that really give us a measure of mental work? The principle of the conservation of energy compels us to refer these energy transformations to the concomitant physiological processes, in which energy can neither be gained nor lost. The entire amount of energy, as determined by calorimetric measurement, is consumed by them; and no energy remains to be referred to the corre-

sponding psychical processes. We have a complete understanding of the energy transformations which are involved in the physiological processes; but we are as far from the dynamic psychology as ever, for we cannot equate mental work with physical energy although we can correlate them. From this it follows that psychodynamics as defined by Dodge has the same limitations as the doctrine of some thirty years ago that psychology must express mental events in terms of brain-physiology."

Chapter 11

Summary and Conclusion.

While second wind acquirement is not rare, the persons pushing themselves beyond the first layer of fatigue are few in number compared to those who stop energizing before they reach it. Few individuals crowd the limits of possible energizing. Under usual conditions and within certain limits the processes of waste in the physical organism due to activity is equaled by the processes of repair. To find the limit where the balance is maintained, thus permitting the maximum of energy development without permanent impair-

ment of the physical machinery, and to find just how varying types of individuals can be stimulated to this maximum is a twofold problem of prime importance to every line of human endeavor.

Habit has much to do with the persistency with which the average individual remains inferior to his full self. And those who escape from this inferiority owe their escape to excitement, ideas, and habitual efforts which push them over the first barriers of fatigue onto levels of consciousness of wider significance. Examples are numerous. In the absence of normal excitement deleterious excitement may functionize to throw the higher powers into gear; but this means the borderland of constitutional abnormality. Far better is it to have the will functionize to open up the deeper levels. Asceticism, religious devotion, love, ambition, ideas, may all become the dynamogenic agents in arousing the reserves of energy. Conversions stimulating to higher activity are usually but the arousing of a dormant idea. Prayer may be an energizer to higher activity.

What, then, is the possible expansion of our power, and what is the method to bring out this maximum expansion are questions presenting our great problem of national and individual edu-

cation—to chart human limits, determine human types, and learn the use of energy reserves.

Our culture ideal passing through the stages of “excelsior” and strenuosity, has reached the third one of efficiency. This adds economy and simplicity to the high aim of the first and the intensity of the second. Efficiency in the industrial world is being enhanced by reducing waste in lost motion by the laborers, thereby reducing fatigue and increasing output, by determining the proper size, shape, style, and weight of tools; by eliminating faulty methods of accounting responsible for many failures each year; by standardization of everything, from component parts of machines to forms of business organizations and corporation and city charters. In agriculture, efficiency is promoted by a large government literature dealing with crop increase, improvement of animals, and betterment of rural social conditions. Schools, colleges, and churches are put hard up against the questions of efficiency; and of every institution, more particularly the quasi-public and public, is demanded a dutiful discharge of public service responsibilities and the erection of higher standards. What, then, of our attainments, abilities, and powers? They must be enhanced by the love of work, making of severe toil play. Physical

as well as intellectual workmen must by knowledge of hygiene keep themselves at the top notch of condition, and learn that sin, being dissipation, weakens accomplishment, while chastity, honesty, temperance, are dynamic as well as religious assets. The powers and heritage of one's ancestors slumber within him. To awaken them to useful work is his problem. And with the loud call to each person to energize to his maximum there sounds out with it in harmonious accord the bugle call to service in the interests of our fellow man.

If by scientific management and study of detail there has been an increase of output at the usual expense of energy, then by utilization of the unused reservoirs of energy by the majority rather than the few, a further multiplication of effective results will follow. But man is more than a machine and psychic factors enter into the process of unlocking the reserves, even the physical reserves; and unless interest is aroused, an idea becomes dominant, or devotion to a cause is developed, the great reservoirs remain untouched. A soulless system of efficiency will scarcely suffice for the higher efficiency pointed out by Doctor Hall and suggested by Doctor James.

"Second breath" or "second wind" is a physical

phenomenon not rare. In cases of second breath a feeling of fatigue is followed by an apparent recovery, when the effort can be maintained indefinitely. Cases of mental second breath, usually of study, have been observed. The question of whether the work accomplished during mental second breath is better or worse than under ordinary conditions is far from being settled. It is very doubtful if the quality is any better than would result from the same degree of application and concentration by the same individual under normal conditions, unless the efforts to push over the barriers of fatigue and the resultant concentration bring about mildly ecstatic conditions in which the convergence of several streams of energy upon the processes of thought intensifies those processes and thereby enhances the product.

Emotion has been found to play an important role in prompting the continuation which brings into play the erethic state. Following the feeling of fatigue and pain there is an intensification of the feeling tone; fear, anxiety, and rivalry enter as factors in prompting the continuance. This is followed by a feeling of increasing power and finally a cessation of pain, absorption in work, and a feeling of increased power and momentum. Physical erethism (according to Partridge) is less

disturbing than mental, and there is a close relation between erethism and the absorption states, and hypnosis, trance, and ecstasy.

In Cannon's studies in bodily changes arising from the major emotions, the reservoirs from which are drawn the extra supplies of energy in physical erethism are pretty clearly pointed out. The intensified emotional tone and the pain arising from the partial asphyxia functionize in liberating adrenin into the blood, resulting in quickened circulation, heightened arterial blood pressure, and the liberation of energy-making stuff, the stored up sugar. Fatigue is lessened and the increase of power is felt almost instantly.

In mental "second breath" or erethism the location of the reservoirs of energy is not so clearly indicated. That there is the increased feeling of power following the intensified emotional tone is certain. It is also quite clear that the emotions playing a role in pushing past the first barriers of fatigue are major ones; fear, anxiety, rivalry; fear of an examination, fear of failure; anxiety over the outcome of the venture, or over the time limitations upon the work; rivalry, with its modified form of anger. These very emotions have been clearly demonstrated as capable of functionizing as stimulators of the adrenals, and adrenin

in the blood, even in minute quantities, among its many other effects, raises the blood pressure, and though it acts as a vasoconstrictor in some regions, owing to the absence of vasoconstrictor nerves in heart, lungs, and central nervous organs, the heightened blood pressure results directly in an increased blood supply to the brain. Just what are the physiological waste products of mental processes is not known; but presuming there are such waste products corresponding to the accumulation of metabolites in the fatigued muscles, then the lavage of the brain tissues by an increased amount of blood would, as in the case of the fatigued muscle tissue, by washing out and carrying off these waste products, permit further energizing. Adrenin may have other specific effects upon the brain tissue. Be that as it may, the increased blood supply as a consequence of the intensification of the emotional tone doubtless functionizes in producing the phenomenon of mental second breath.

In another place we have epitomized two articles on alcoholism. According to one the alcohol motive was found in aroused sense of power enjoyed by the inebriated individual at certain stages of intoxication, an expanded self, and that this euphoristic feeling promoted an exaltation

which contributed towards higher activities and levels of consciousness. According to the other, the alcohol motive is found in a desire for relief from the tension which is a correlate of intellectual progress, the tension becoming greater as men live more nearly up to the limit of the latterly acquired capacities. This theory for the alcohol motive runs parallel with the play motive.

Alcoholic intoxication can scarcely be called artificial ecstasy. Alcoholic intoxication presents psychological conditions simulating those of ecstasy, and this simulation may result in erroneous conclusions. In ecstasy there is a central focus of attention. In alcoholic intoxication, on the contrary, there is a confusion and a decentralization owing to the paralysis of the more lately acquired cortical layers. It is not a convergence of psychic nerve streams as in ecstasy, but a shutting off of some.

It therefore appears doubtful that alcoholic intoxication is a factor contributing towards the higher powers of man any further than that it is sought as an artificial though deleterious means of relaxation.

There are intoxications more nearly allied to ecstasy than is the alcoholic intoxication. Narcosis has been termed chemical ecstasy. Intoxi-

cations approximating ecstasy are those wherein there is an excitation or stimulation of some sense organ till there is a concentration of attention upon it, accompanied by an isolation more or less complete of the outer world, hallucinations, visions, etc. An ecstatic Dervisher, a Bolivian coco chewer, and an Indian opium smoker have striking resemblances. Ecstasy, as a hypnotism of the emotions or thoughts, without doubt plays a very important contributory role in calling out the higher powers and energies of man. Periods of deep meditation and reverie are far from uncommon with men of achievement.

As has been pointed out, ecstasy may vary greatly in intensity from the faintest twilight form to the deepest catalepsy. A single case of ecstasy may pass through all the forms, and the nervous energy stored up at its initiation may all be expended in the consummation of the ecstatic state itself. But the ecstatic state may abruptly terminate at any stage, and the accumulated nervous energy, seeking outlet, may pass into various channels. And these interrupted or only partially complete cases of ecstasy are those which usually functionize as keys in unlocking the reservoirs of energy constituting the higher powers of man. When there has been concentration of attention

upon a single point of consciousness till other sensations are temporarily eliminated and there has followed a keen, inexplicable sense of the grandeur, the greatness of the object of attention, especially when at the focus of attention lies a thought, an idea, there are left upon the brain centers ineradicable impressions whose complexes will ever after come into consciousness in an imperative manner likely to functionize as a determiner of conduct. Hence it is that an idea can dominate one's life. This is particularly true if the ecstatic condition fixing the complex is repeated and has issued from a contemplation of what in its nature has a more or less direct bearing upon the future activities of the individual.

Many are the agents of ecstasy, as we have seen, and perhaps few are the individuals who in some form or another have not experienced ecstasy to some degree. There are few who reach the higher stages; but whether or not ecstasy is permitted to exert its full influence towards developing the higher powers of man depends upon the manner in which the stream of nervous energy directed upon the single point is permitted to expend itself. Allowed to exhaust itself in idle reverie or day dreaming, it is evanescent in influence if not injurious; but sublimated or re-

finer, transformed into useful work, it becomes psychically dynamogenic and impels towards a full utilization of physical and mental powers towards an adequate and lasting manifestation. The ecstatic state repeated in the same way or upon the same point fixes this great directing agent in the conscious and subconscious till consciously and subconsciously the individual is ruled by what has taken form first in the ecstatic state. Thus a thought, an idea, a vision, glimpsed only for the briefest part of a second, may eventuate in molding a life's course and pointing the road to the highest achievement. It may be love, religion, science, friendship, prayer, patriotism, beauty, music, which initiates the ecstasy in which the star gleam is caught which becomes the compass to the individual's life; but once caught and held, it beckons ever onward and upward. And following its direction in the climb upward there are left behind blessings to humanity in the form of art, scientific achievement, literature, architecture, something to say to posterity, "See what can be done by one of genius."

Not only has the ecstatic state played a role among the cultured races, but among primitive peoples as well. In various ways are the ecstatic states produced. The peyote religion has taken

a strangely strong hold upon the American tribes of Indians in recent years, and the secret lies in the ecstasy produced in the ceremonies. The beautiful visions seen in the peyote tepee have a softening mystic effect upon the devotees, while the psychic power of suggestion perhaps augmenting the therapeutic value of peyote itself has performed some wonders fascinating to the Indian minds. So strangely powerful has been the influence of this religion upon the tribes that it has in numerous cases given new direction to the tribal life.

That the ecstatic state has been conspicuous among many primitive peoples is quite readily apparent from an examination of their cults. Primitive man is generally religious, and dreams and visions play an important role in the lives of the tribe members. Fasting and religious vigils of astonishing rigidity are utilized to produce the ecstatic states, while dances, bodily exercises, and repetition of monotonous words are all utilized to produce swoons and ecstasy.

The rigidity of belief and characteristic simplicity of the savage mind, together with his nervous susceptibility, and his proneness to be governed by emotions, all combine to make the

ecstatic state not only common but important as a tribal influence.

The rigorous, impressive, exacting, and frequently prolonged initiation ceremonies of the natives, with the frequently repeated conditions wherein at least the lesser ecstatic states were produced, made these ceremonies a strong factor in absorbing the attention of the novitiate in the importance of tribal life and the great significance of becoming a fully initiated man therein. And the splendid solidarity of the tribes, the resourcefulness of their hunters and warriors, their ferocity and skill in fighting the encroachments of the white man, all bespeak the excellent purposiveness of the initiation ceremonies in arousing the reserve energies of the young man and calling out the best response to his environment by making the task of becoming a tribe member of use and skill the dominant idea of his life. Pity it is that every young man in our society to-day cannot in his educational activities have developed within him an equally weighty impression of the importance of filling well and usefully a position in the society which has brought him into life and to which he owes a life of service. And pragmatically it makes little difference whether that consciousness of tribal unity is im-

pressed upon the native young initiate through the idea of a great manitou bursting in upon him, or whether it be a twilight awakening of a social consciousness. Its value to the tribe is seen in the service he renders it as a result.

What religious ecstasy will accomplish in promoting tribal or racial solidarity, even when the ceremonies are of a rude, coarse type, is seen in the vodu cult among the negroes of Louisiana and Hayti.

While, as we have seen, the initiation ceremonies are quite universal, yet their social significance is nowhere better illustrated than in Australia. In the Australian initiation rites every rule laid down was supposed to have social community value. To have every member of the tribe working to the best of his ability for the social weal of the community was of prime importance. The initiation ceremonies are therefore not mere jumble or nonsense. The whole is socially purposive. A deep, lasting, mastering interest in tribal life and tribal affairs must be aroused within the novitiate, for his own good and the good of the tribe; his own good being inseparable from the community good. Principles to govern the life conduct of the youth are therefore impressed upon him in a way never to be forgotten; obedi-

ence to the old men of the tribe, observance of the marriage laws, his duties in regard to the division of spoils of war or chase, careful observance of the rules and laws of magic and where to exercise it. Before he can take his place as a tribesman, enjoying its privileges and knowing its secrets, it must be known that he has the qualifications.

That the ceremonies duly impress upon the novitiate all these things so vital to the welfare of the tribe is evidenced by the fact that instances have been known wherein fracture of some of the rules forbidding the use of certain foods has been followed by fatal effects due to the workings of conscience and the fear of the results threatened.¹

Those who have visited and been among the native Australians, living according to their primitive conditions, agree that sterling qualities are found among them in men who try to live according to the standards set by their traditions,—qualities which are unfortunately not found among these tribes so under the changed conditions of white civilization that tribal customs have been abandoned.

And what could be expected? This is not due to the inferiority of our civilization, but to the in-

¹See Howitt's *Native Tribes of Southeastern Australia*, p. 639.

adaptability of the natives and to the unsuitable and unfavorable conditions concomitant upon abandonment of those institutions which centered their whole life's interest in the community and a shifting of that interest to a self naturally shiftless and too poorly endowed for success where individualistic struggle predominates. The dominant interest is gone. No state of ecstasy encourages the development of the best that is in them. To their own natural vices, uncontrolled by tribal tabu, are added the vices of their new but changed life, and the worst that is in them comes to the fore.

When Mr. Howitt, as headsman of the Kurnai, revived for scientific purposes the Jeraeil, which had been discontinued for a number of years, one of the worthy old black fellows said to him: "I am glad it will be held, for our boys are all going wild since they have gone to the white people; we have no longer any control over them."¹

Of anger there remains little to be said other than what has been touched upon elsewhere in this treatise. As pointed out by Cannon, anger is one of the most effective emotions in preparing for

¹Webster's *Primitive Secret Societies*, p. 59, quoted from Howitt. See also Spencer and Gillen, *Tribes Central Australia*, pp. 7, 8.

great and sudden output of power in meeting emergency conditions of flight, defense, or contest. It is preeminently serviceable for such display of power. Fear often acts as its counterpart. That anger functionizes as a developer of the higher powers of man in a biologically purposive way is scarcely to be gainsaid; whether it enters as a factor into the development of intellectual accomplishments and long distance pursuits depends entirely on how the emotion once aroused is worked off. Exhausted in useless storming it furnishes a vent for unusual pressure, nothing more. Refined, sublimated, directed into useful channels, it may be the initiative toward meritorious achievement. Mastery of anger qualifies the individual for control of trying situations, and may be considered basal to general aggressiveness. It is in varying degrees an essential concomitant of the fighting spirit, the varying kinds and qualities of combat demanding varying degrees, tensities, and refinement of anger. Socialized, it plays a role in community betterment and becomes of community value as it becomes altruistic rather than individualistic. Righteous indignation is frequently the key to reservoirs of unusual energy.

Not alone in primitive cults has ecstasy played

a role in calling out the best in its devotees. The ecstasy cult of Dionysos came as a reviver if not a savior of Grecian art, religion, and ethics. The sleepy gods of Olympia were startled by the noisy train of dancing Dionysians, and Greece awakened from her lethargy took a new lease on life which kept her from a decline such as other countries had experienced. The wild, entrancing religion of the Thracian god, molded into the Greek life and fused with the best of the Olympian product, called into existence a new national spirit. It was the principle of ecstasy blending with dreams of beauty. It was the mysterious union of Apollonianism and Dionysianism, giving rise to the birth of Attic tragedy. Around the shores of the Mediterranean sprang up religions in which this same ecstatic element functionized and from its peoples came developments in arts and philosophy bespeaking the efficacy of ecstasy as a freer of the higher powers of man. We have not here gone into an examination of Mohammedanism, Buddhism, and others, for space limitation forbids, but all bespeak the presence and importance of the ecstatic state.

Few religions have made more striking contributions in this direction than has the Christian. Founded by one who to a remarkable degree lived

in a higher level of consciousness, and who energized to a maximum because motivated by an idea or ideal which had early in life taken full possession of him, and which raised him above fatigue, suffering, trials, and opposition, which caused him to find exaltation and glory even in his agony. And from Jesus' day to this have the Christians with the example of their great leader ever before them, furnished many and striking examples of power and strength which carry one over every obstacle and to a victory more or less complete.

The splendid courage and genius of Jesus and imitated and further demonstrated in his followers in all ages, without doubt found its dynamogenesis in the ecstasy of devotion, prayer, meditation. Devotion to the Christian religion has given to the world untold treasures of art, literature, genius. The acme of group religious manifestations and ecstatic joys with psychic exaltation was reached at Pentecost, while in an individual way Paul's expansion of soul "to all the universe" was the very acme of ecstasy.

And what promise or lesson does all this hold out to us? Pedagogically it holds out the promise that what has been may be, and the lesson is that if we would have from each member of society the optimum of behavior there must be en-

gendered the maximum of energy, and this must be called out by those emotional conditions which shake the whole man into wakeful activity. Only when one has caught an ecstatic vision of the great possibilities, when with the keen enjoyment of deep thought there has flashed before his mind the gleam of light which like a powder train leads to the great reservoirs of power within him, are there liberated within him the forces which will under intelligent control bring out the best in him. Love, love of work, love of woman, love of humanity, love of country, devotion, devotion to the home land, to a society, to a cause, to an idea,—all act as the compass which aids in laying down on the chart of life a course which without fail or deviation brings to the port of greatest achievement.

But an idea alone, inactive devotion, idle dreaming, never bring this. There must be work,—ceaseless, tireless work. Work is what vitalizes the ecstatic vision. And to work to the maximum means much. It means to keep within the limits to go beyond which would mean permanent impairment of efficiency; it means the elimination of waste,—waste in time, labor, motion. Along with the psychic forces loosening and controlling the nervous powers there must go a conservation

of energy and physical machinery which safeguards its permanency and proper use.

There is no greater psychically dynamogenic factor than altruism. Everywhere the need of humanity for service is apparent. To-day the call is loud for devoted service. But the service demanded is the best individual effort following the best individual preparation therefor, that effort to be consecrated to the good of the community.

Somewhere in our educational system to-day there is need for something to supply to us what the initiation ceremonies do to the savage community; viz, there is need that every young man and woman shall be aroused to the importance and seriousness of becoming a member of society, aroused to a social consciousness which will contribute to social solidarity. Far too many young people enter life's activities as logs drifting on the stream of time, rather than as steamboats or even canoes directed by intelligent energy.

Sooner or later every person should become attached to some cause, working for a purpose whose ultimate goal may have only been glimpsed in some ecstatic moment, which thus becomes a guiding star towards his destiny.

The higher powers of man, to be fully utilized

demand a fuller knowledge of man himself,—of his physical limitations as well as the psychical attributes. Between the psychical and physical there is a well-balanced cooperation which if thrown out of poise is attended with dangers and penalties. "The best that is in me for the good of humanity," is a slogan everyone can well adopt. Religion develops this spirit of altruism as perhaps nothing else does. Religion has always been a stimulator of higher achievement, though perhaps at times negatively so.

In no period of the individual life is there greater need for the directional influence of a dominating interest than in the storm and stress period of pubescence, when the adolescent life is made up of impulse and intense feeling. At such a time there is needed a back fire to sex, and this is found in the interest which absorbs in wholesome activity the nervous energy which otherwise will run into morbid lines with physically and morally pathological results. Youth is drunkenness without wine¹ and the tendency for fast living at this age must find a legitimate outlet, to avoid morbidity and perversion. At puberty the individual breaks into the larger life of the

¹Goethe.

race, and for that event every preparation should have been made by providing adequate and proper outlet for every force which nature at that period provides so lavishly. The whole being thrills with the larger life, and under right guidance and given legitimate direction it can lead to the inspiration of the poet, the muse, the genius in every line of activity. Its perversion leads in the opposite direction.

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